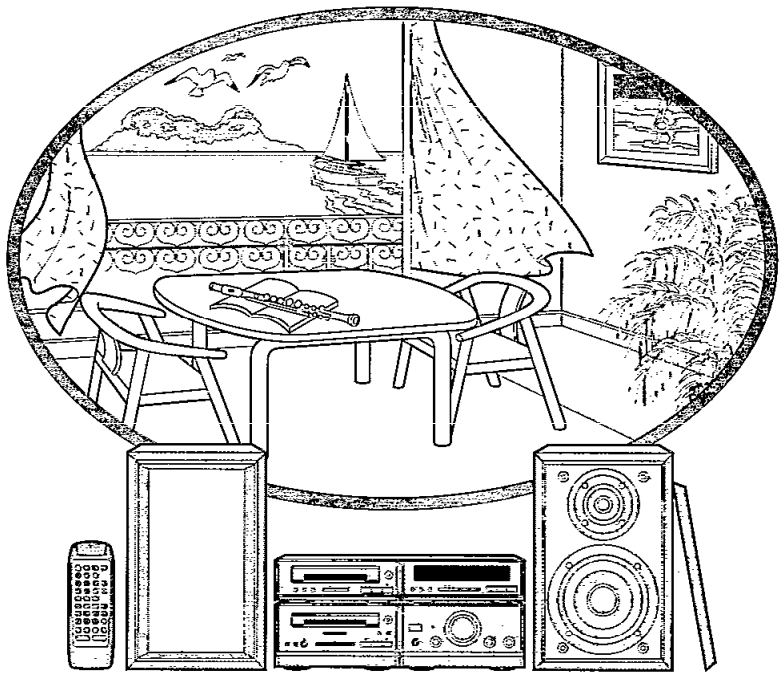
Technics®

System Component

SC-HD51

SC-HD81

Operating Instructions



The illustrations show SC-HD51.

Note:
The "EB" indication shown on the outside packing case indicates United Kingdom.

Before connecting, operating or adjusting this product, please read these instructions completely. Please save this manual.

EB EP

COMPACT disc DIGITAL AUDIO

RQT4307-B

Dear customer

Thank you for purchasing this system.
For optimum performance and safety, please read these instructions carefully.

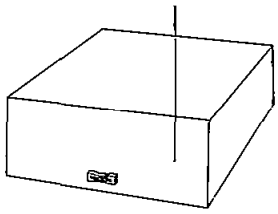
These operating instructions are applicable to the following systems. These operating instructions, however, fundamentally explain the operation of system SC-HD51.

System	SC-HD51	SC-HD81
Amplifier	SE-HD51	SE-HD81
Tuner	ST-HD51	ST-HD81
CD player	SL-HD51	—
CD changer	—	SL-HD81
Cassette deck	RS-HD81	RS-HD81
Speakers	SB-HD51	SB-HD81

CAUTION!
THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.
DO NOT OPEN COVERS AND DO NOT REPAIR YOURSELF. REFER SERVICING TO QUALIFIED PERSONNEL.

CAUTION!
DO NOT INSTALL OR PLACE THIS UNIT IN A BOOKCASE, BUILT IN CABINET OR IN ANOTHER CONFINED SPACE IN ORDER TO KEEP WELL VENTILATED CONDITION. ENSURE THAT CURTAINS AND ANY OTHER MATERIALS DO NOT OBSTRUCT THE VENTILATION CONDITION TO PREVENT RISK OF ELECTRIC SHOCK OR FIRE HAZARD DUE TO OVERHEATING.

CD changer or CD player

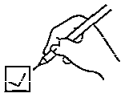


(Back of product)

DANGER	INVISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM.	(Inside of product)
ADVARSEL		(Indersiden at apparatet)
VARO!		(Tuotteen sisällä)
VARNING		(Apparatens insida)
ADVARSEL		(Produktets Innside)
VORSICHT		(Im Inneren des Gerätes)

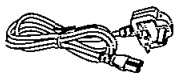
THIS MUSIC SYSTEM IS CAPABLE OF RECEIVING THE NEW AM STEREO BROADCASTS FROM THE AM BAND RADIO STATIONS. HOWEVER LIKE MANY MUSIC SYSTEM CURRENTLY AVAILABLE ON THE MARKET IT WILL REPRODUCE THIS AM STEREO SIGNAL ONLY IN AM MONO, WHICH, IN EFFECT, IS OF NO LESSER QUALITY THAN YOUR EXISTING AM MONO MUSIC SYSTEM.

Supplied accessories



Please check and identify the supplied accessories.

☐ AC power supply cord ..... 1 pc.
For United Kingdom (VJA0733) For others (RJA0019-2K)

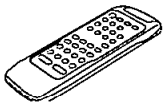


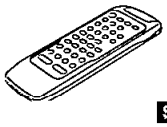
☐ Flat cable (Long thick) (REX0812) ..... 1 pc.

☐ Flat cable (Long thin) (REX0813) ..... 1 pc.

☐ Flat cable (short) (REX0608) ..... 1 pc.

☐ Remote control transmitter ..... 1 pc.
ST-HD51 for United kingdom (RAK-CH215WH)
ST-HD51 sold outside United Kingdom (RAK-CH193WH)



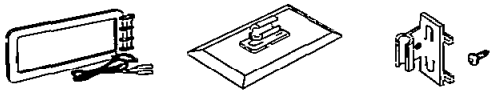


SC-HD81 (RAK-CH214WH)

☐ Remote control batteries ..... 2 pcs.
[R03/LR03 (AAA, UM-4)]

☐ FM indoor antenna ..... 1 pc.
(RSA0007)

☐ AM loop antenna set (RSA0021)
- AM loop antenna ..... 1 pc.
- Antenna holder with stand ..... 1 pc.
- Antenna holder without stand ..... 1 pc.
- Screw ..... 1 pc.



☐ Speaker cords ..... 2 pcs.
For SC-HD51 (REE0393) For SC-HD81 (RFA0737-R)

☐ Antenna plug adaptor (SJP9009) ..... 1 pc.
(United Kingdom only)

Use numbers indicated in parentheses when asking for replacement parts.

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Removing the shipping spacer
(SC-HD81 only)
A spacer is inserted inside tray 5 of the CD changer to protect the trays during transport.
Be sure to take the spacer out before using your changer.
(See page 19.)

(For United Kingdom)

("EB" area code model only)

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.
A 5-ampere fuse is fitted in this plug.
Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362.
Check for the ASTA mark or the BSI mark on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.
If you lose the fuse cover the plug must not be used until a replacement cover is obtained.
A replacement fuse cover can be purchased from your local dealer.

CAUTION!
IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY.
THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted please observe the wiring code as shown below.
If in any doubt please consult a qualified electrician.

IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:
Blue: Neutral, Brown: Live.
As these colours may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured Blue must be connected to the terminal which is marked with the letter N or coloured Black or Blue.
The wire which is coloured Brown must be connected to the terminal which is marked with the letter L or coloured Brown or Red.

WARNING: DO NOT CONNECT EITHER WIRE TO THE EARTH TERMINAL WHICH IS MARKED WITH THE LETTER E, BY THE EARTH SYMBOL ⏚ OR COLOURED GREEN OR GREEN/YELLOW.

THIS PLUG IS NOT WATERPROOF—KEEP DRY.

Before use

Remove the connector cover.

How to replace the fuse

The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below.
Illustrations may differ from actual AC mains plug.

1. Open the fuse cover with a screwdriver.

Figure A

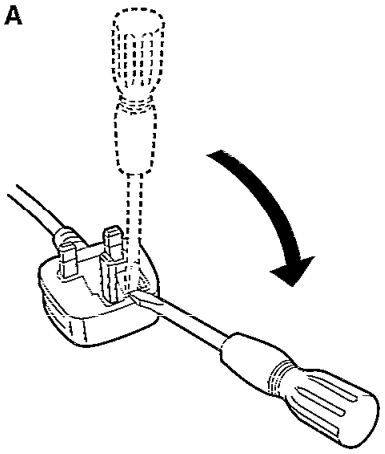
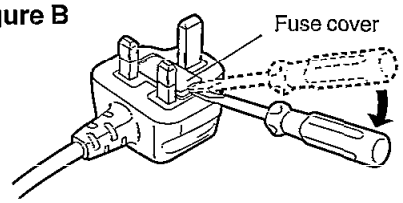


Figure B



2. Replace the fuse and close or attach the fuse cover.

Figure A

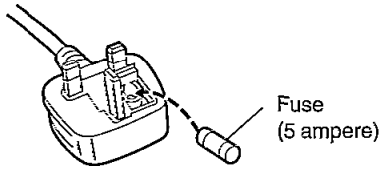
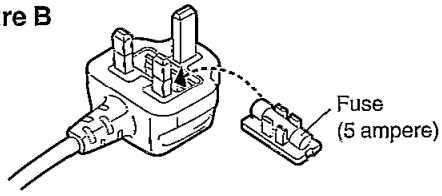
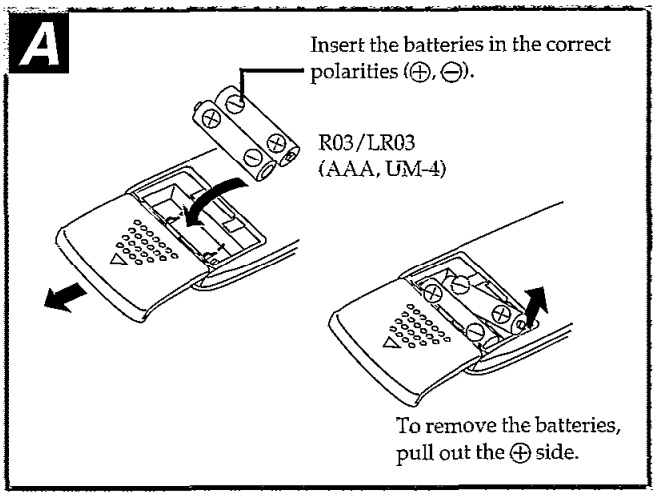


Figure B



Preparing for the remote control

Battery installation A

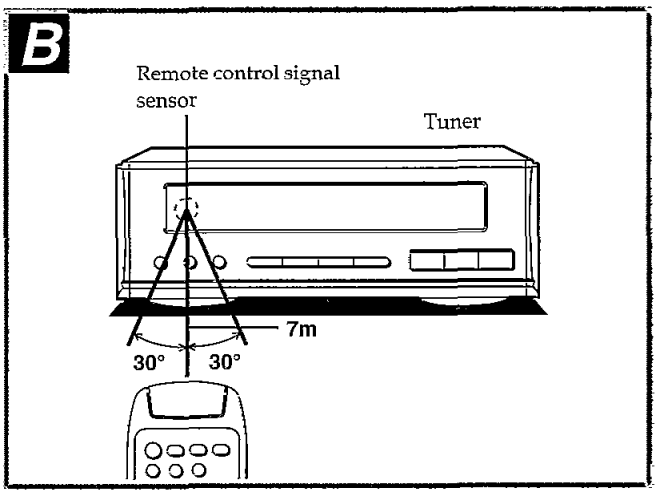


- Do not mix old and new batteries, or batteries of different types (manganese and alkaline, etc.).
- Never subject batteries to excessive heat or flame; do not attempt to disassemble them; and be sure they are not short-circuited.
- If the remote control is not to be used for a long period of time, remove the batteries and store them in a cool, dark place.
- Do not attempt to recharge alkaline or manganese batteries.
- Do not use rechargeable type batteries.

The battery life is about one year.

The batteries should be replaced if commands from the remote control transmitter do not operate the unit even when the transmitter is held close to the front panel.

Correct method of use B

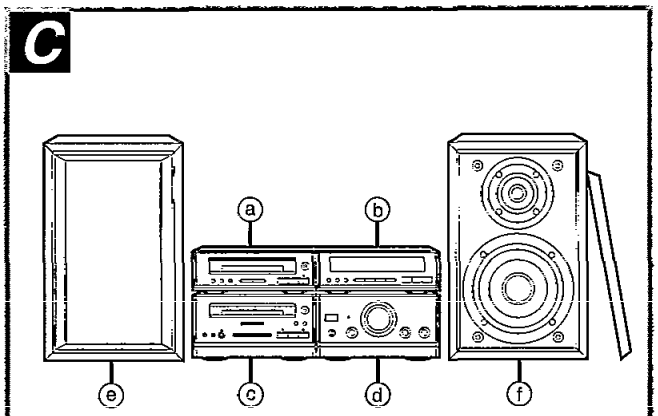


- Aim the remote control's transmission window toward the unit's sensor. Avoid any obstacles.
- The maximum distance is within 7 meters directly facing toward the remote control signal sensor.
- Be sure the transmission window and the unit's sensor are free from dust. Excessive dust might affect its performance.
- The operation may not be correct if direct sunlight or other strong light source strikes the receiving sensor of this unit. If there is a problem, place the unit away from the light source.
- If this system is installed in a rack with glass doors, the glass doors' thickness or color might make it necessary to use the remote control a shorter distance from the system.
- Never place heavy items.
- Do not disassemble or reconstruct.
- Do not spill water or other liquids.

Installation

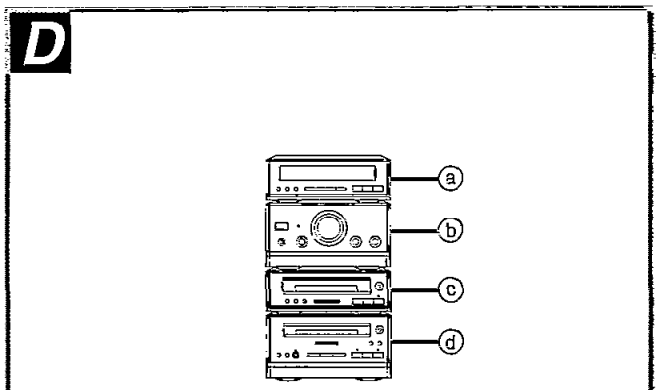
Locating the components

Side-by-side set-up C



ⓐ CD player (SL-HD51)
CD changer (SL-HD81)
ⓑ Tuner (ST-HD51/81)
ⓒ Cassette deck (RS-HD81)
ⓓ Amplifier (SE-HD51/81)
ⓔ Left speaker (SB-HD51/81)
ⓕ Right speaker (SB-HD51/81)

Stacking D



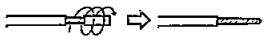
ⓐ Tuner (ST-HD51/81)
ⓑ Amplifier (SE-HD51/81)
ⓒ CD player (SL-HD51)
CD changer (SL-HD81)
ⓓ Cassette deck (RS-HD81)

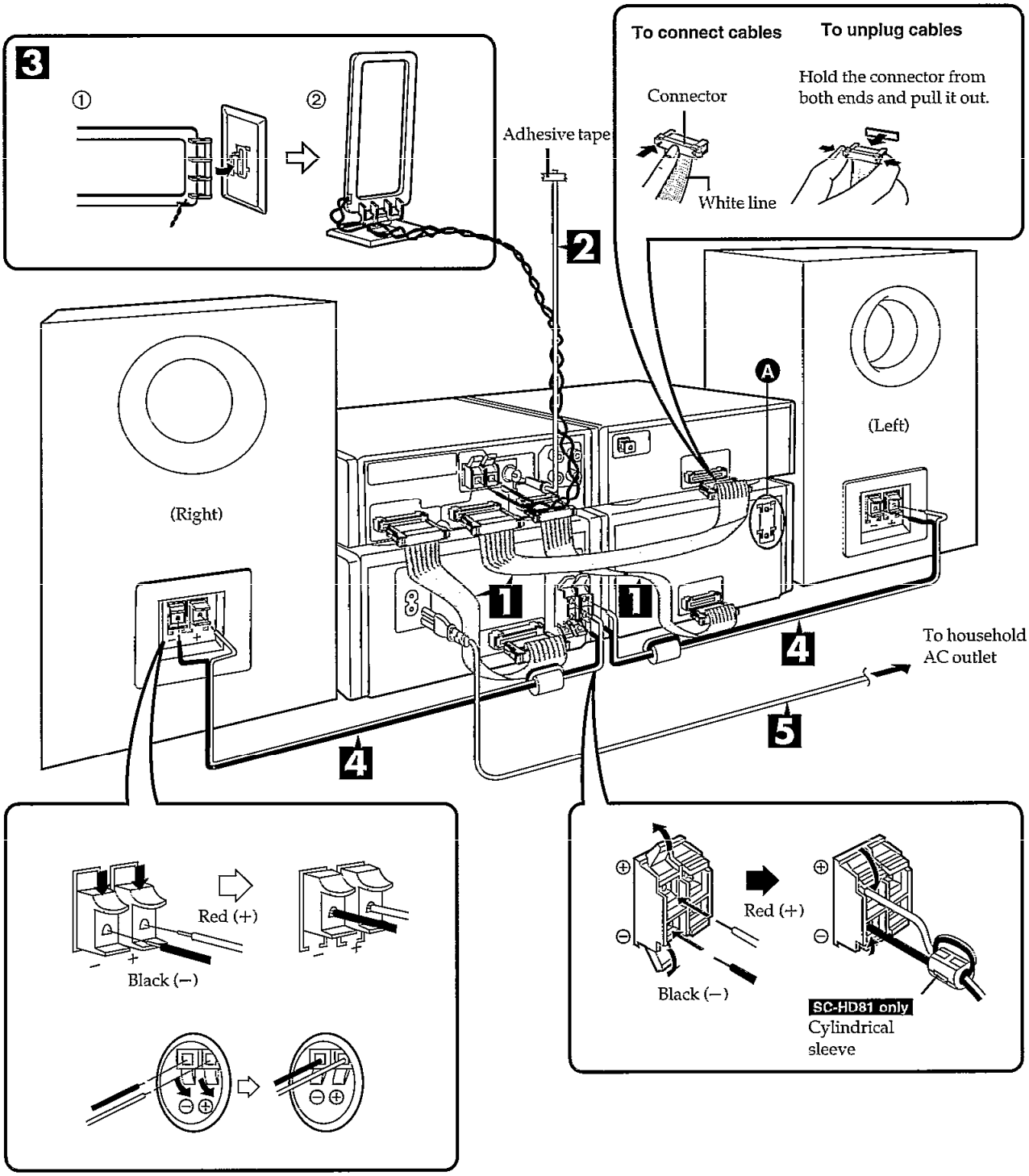
Caution
Use the speakers only with the recommended system. Failure to do so may lead to damage to the amplifier and/or the speaker, and may result in the risk of fire. Consult a qualified service person if damage has occurred or if you experience a sudden change in performance.

Note
Left and right speakers are exactly the same.

Connect the AC mains lead after you have connected all other cables.

To prepare the AM loop antenna wire and speaker cords, twist the vinyl cover tip and pull off.





1 Connect the flat cables.

1. Connect the short flat cable to the terminal of the A1 and A2.
2. Connect the long thick flat cable to the terminal of the B1 and B2.
3. Connect the long thin flat cable to the terminal of the C1 and C2.

Note

Do not try connecting or disconnecting the flat cables while the power is switched to ON.

After connection:

Keep cables as flat against the back of the unit as possible.

2 Connect the FM indoor antenna.

Tape the antenna to a wall or column, in a position where radio signals are received with the least amount of interference.

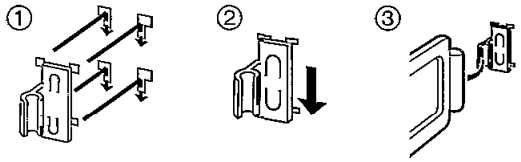
Note

When you cannot get a good reception with this FM indoor antenna, we recommend you install an FM outdoor antenna (not included).

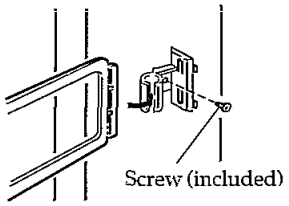
3 Connect the AM loop antenna.

You can also install the AM loop antenna on the rear of the cassette deck, wall or pillars.
In this case, be sure to use the antenna holder with the hole.

•To install on the cassette deck rear (Ⓐ)



•To install on walls or pillars



Note

To minimize noise pickup, bundle the loop antenna cord using a tape or so to keep the flat cables away from the AM loop antenna cord.

4 Connect the right (R) and left (L) front speaker cables.

Note

- For SC-HD81 connect the end of the speaker cable with the cylindrical sleeve to the amp side.
- To prevent damage to circuitry, never short-circuit positive (+) and negative (−) speaker wires.
- Be sure to connect only positive (red) wires to positive (+) terminals and negative (black) wires to negative (−) terminals.

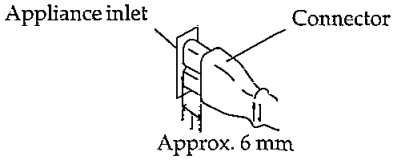
These speakers are made so as to be able to be used in close proximity to the TV, but irregular coloring may result due to how the system is placed. If such distortion occurs, turn off the TV for sometime between 15 and 30 minutes. The demagnetizing function of the TV will eliminate the distortion. If the irregular coloring is still visible, then move the speaker further away from the TV. Please note that if there is a magnetic object near the TV, irregular coloring may result due to the interaction between the TV and the speakers.

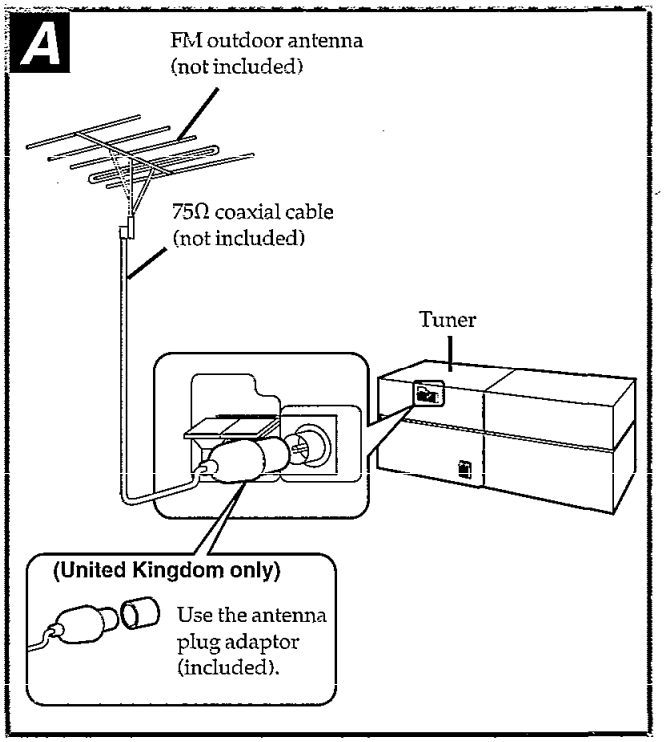
5 Connect the AC mains lead.

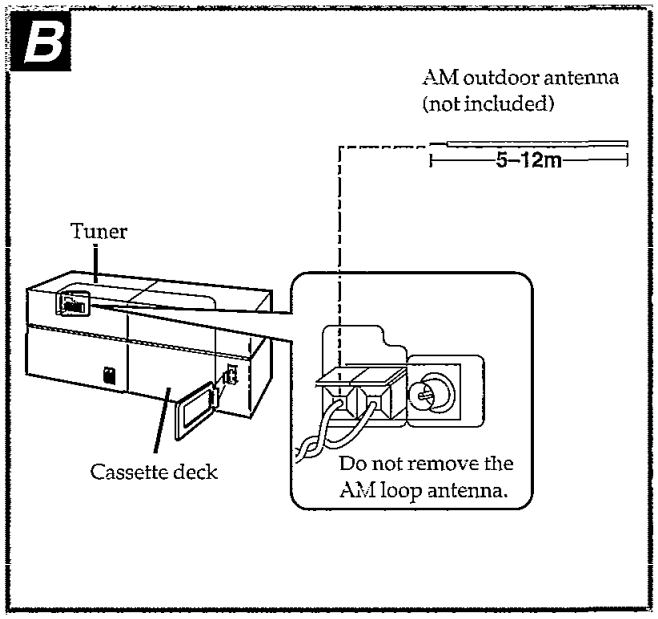
(United Kingdom only)
BE SURE TO READ THE CAUTION FOR AC MAINS LEAD ON PAGE 4 BEFORE PROCEEDING TO STEP 5.

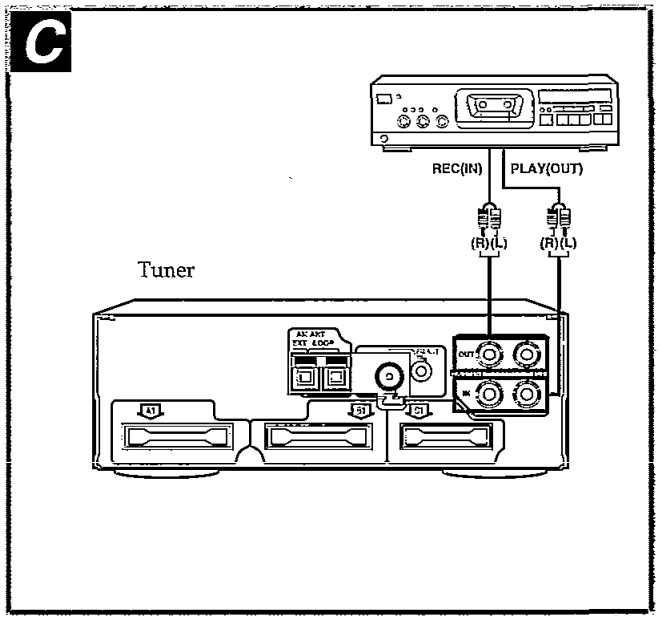
Insertion of Connector

Even when the connector is perfectly inserted, depending on the type of inlet used, the front part of the connector may jut out as shown in the drawing.
However there is no problem using the unit.









Optional antenna connections

You may need an outdoor antenna if you use this system in a mountainous region or inside a reinforced-concrete building, etc.

FM outdoor antenna (not included) A

Note

An outdoor antenna should be installed by a competent technician only.

AM outdoor antenna (not included) B

Connect the outdoor antenna without removing the AM loop antenna. Run 5 to 12 m of vinyl-covered wire horizontally along a window or other convenient location.

Note

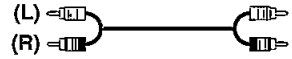
When the unit is not in use, disconnect the outdoor antenna to prevent possible damage that may be caused by lightning. Never use an outdoor antenna during an electrical storm.

External unit connections

Connecting a cassette deck C

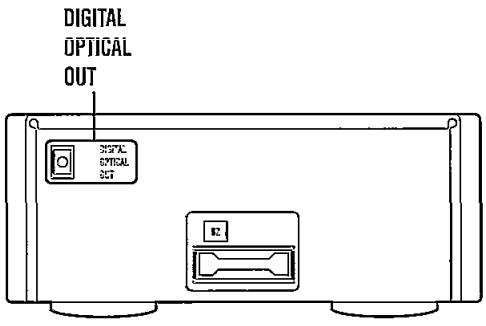
- Make sure that the power supply for all components has been turned off before making any connections.
- For details, refer to the operating instructions of the cassette deck which is to be connected.
- All peripheral components and cables sold separately.

Stereo connection cable
White (L)
Red (R)

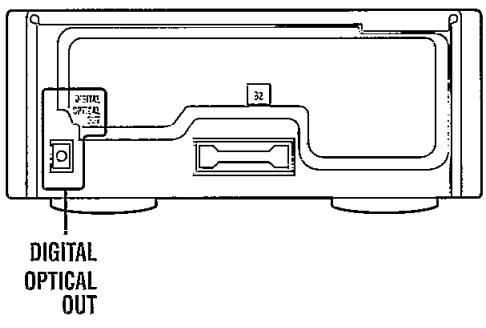


Connections to "DIGITAL OPTICAL OUT" terminal

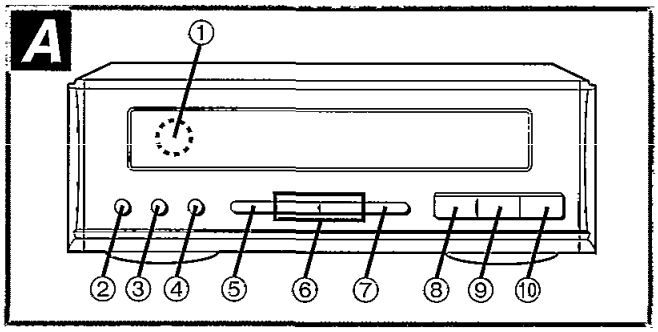
SL-HD51
CD player

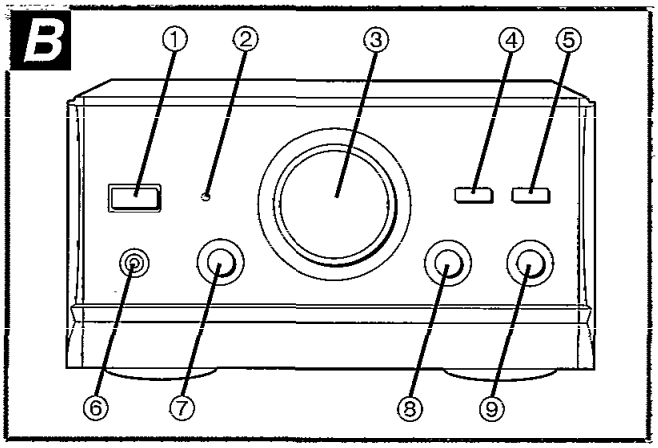


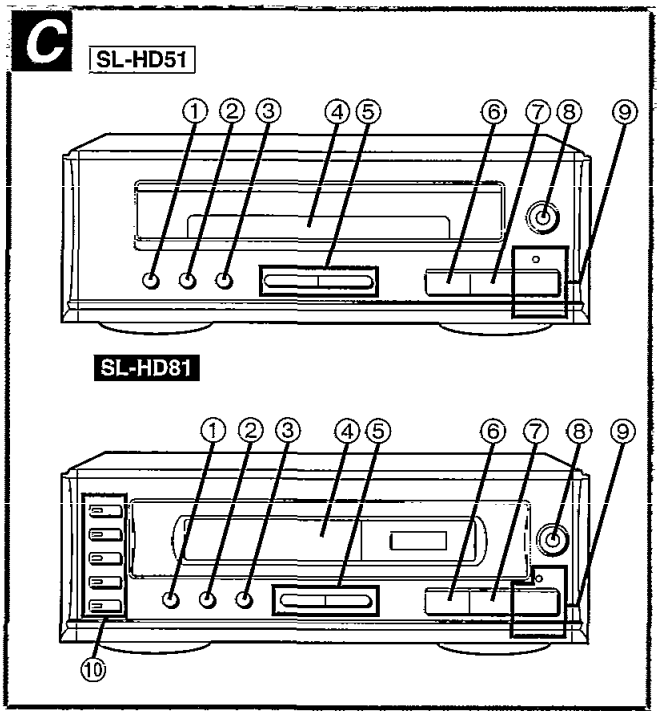
SL-HD81
CD changer

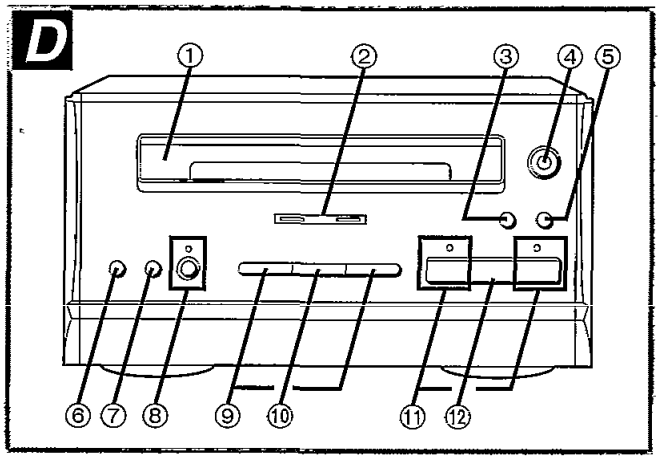


Before using this terminal, take out the dust protection cap.
Connect an optical-fiber cable to the optical input terminal of the DCC or minidisc deck (cables and components not included).









Tuner section

A

① Remote control signal sensor
② Record timer button (⏲ REC)
③ Play timer button (⏲ PLAY)
④ Clock/timer button (CLOCK/TIMER)
⑤ Set button (SET)
⑥ Tuning/time adjust buttons (∨, ∧ TUNING/TIME ADJUST)
⑦ Tuning mode select button (TUNING MODE)
⑧ Source input select button (INPUT SELECTOR)

ST-HD51 For United Kingdom

⑨ FM band select button (FM)
⑩ AM band select button (AM)

ST-HD51 sold outside United Kingdom

ST-HD81

⑨ RDS display mode select button (RDS DISPLAY MODE)
⑩ Band select button (FM/AM)

Amplifier section

B

① Power "STANDBY ⏻/ON" switch (POWER, STANDBY ⏻/ON)
Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.
② Standby indicator (STANDBY)
When the unit is connected to the AC mains supply, this indicator lights up in standby mode and goes out when the unit is turned on.
③ Volume control (VOLUME)
④ SE-HD81 only
Source direct button (SOURCE DIRECT)
⑤ SE-HD81 only
Vocal presence button (VOCAL PRESENCE)
⑥ Headphones jack (PHONES)
⑦ Balance control (BALANCE)
⑧ Bass control (BASS)
⑨ Treble control (TREBLE)

CD player section SL-HD51 CD changer section SL-HD81

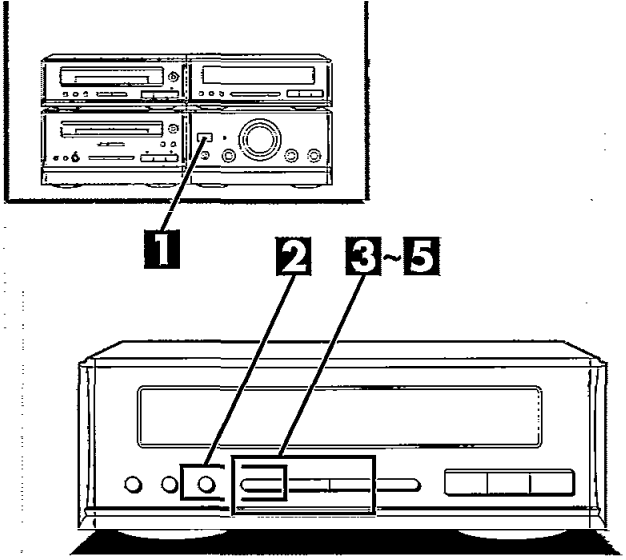
C

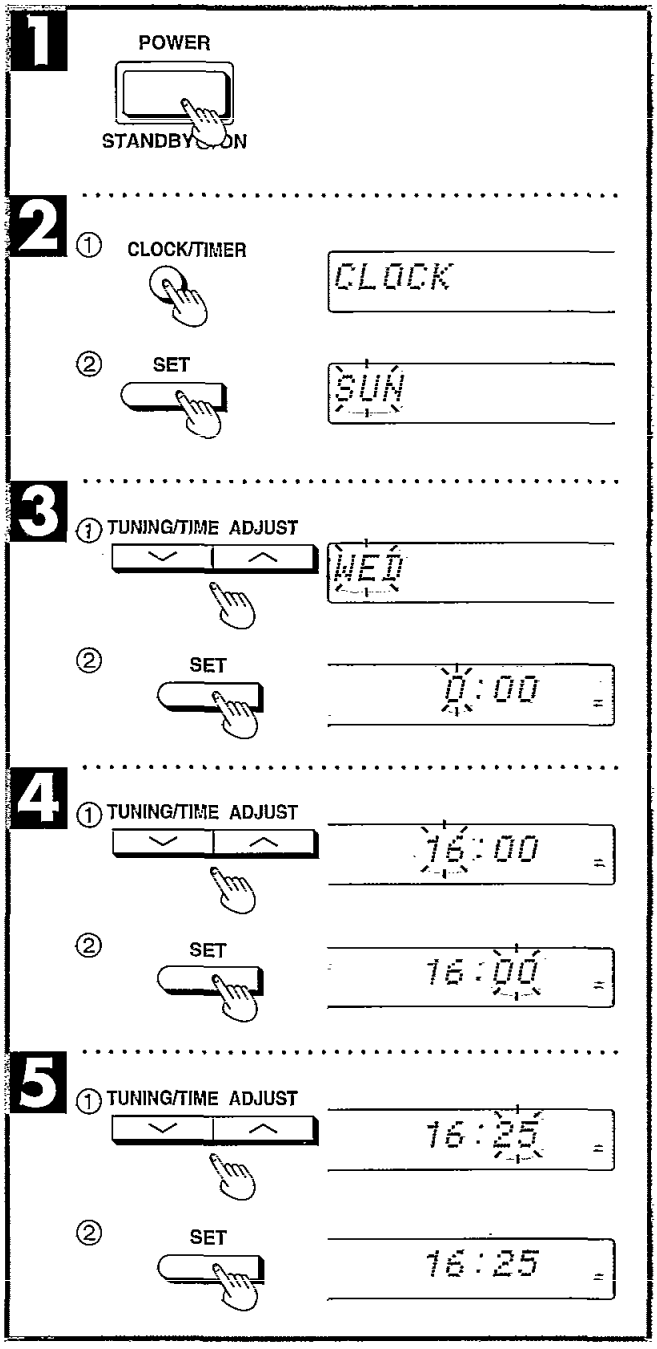
① Random play button (RANDOM)
② Repeat button (REPEAT)
③ AI edit button (AI EDIT)
④ Disc tray
⑤ Skip/search buttons (⏮/◀◀, ▶▶/⏭)
⑥ Stop button (■)
⑦ Pause button (❚❚)
⑧ Disc tray open/close button (⏏ OPEN/CLOSE)
⑨ Play button and indicator (▶)
⑩ SL-HD81 only
Disc select buttons and indicators (DISC)

Cassette deck section

D

① Cassette holder
② Fast forward/rewind indicators (HIGH SPEED FF/REW)
③ Counter reset button (COUNTER RESET)
④ Cassette tray open/close button (⏏ OPEN/CLOSE)
⑤ Display button (DISPLAY)
⑥ Dolby noise reduction button (DOLBY NR)
⑦ Reverse mode select button (REV MODE)
⑧ Record pause button and indicator (● REC PAUSE)
⑨ Fast forward/rewind/tape program sensor buttons ([TPS] ◀◀, ▶▶ [TPS])
⑩ TPS skip button (TPS SKIP)
⑪ Playback buttons and indicators (◀, ▶)
⑫ Stop button (■)





Setting the time

The tuner displays the time, frequency and other information on CDs and tapes.

This is a 24-hours display clock.

These instructions explain how to set the timer for 16:25 on Wednesday.

1 Switch on the power.

2 ① Press CLOCK/TIMER to show "CLOCK".
Every time you press the button, the indication changes in the order of CLOCK→⏲ REC→⏲ PLAY→Original display.
Within 8 seconds:
② Press SET.

3 ① Press ∨ or ∧ to select the day.
Every time you press one of the buttons, the indication changes in the order of SUN⇄MON⇄TUE⇄WED⇄THU⇄FRI⇄SAT.
② Press SET.

4 ① Press ∨ or ∧ to select the hour.
② Press SET.

5 ① Press ∨ or ∧ to select the minutes.
② Press SET to finish setting the time.

The display will return to the previous display after about 3 seconds.

When "–:–" appears:
It flashes when you connect the AC power supply cord for the first time or if there has been a power failure.
Reset the time as explained above.

If the minutes setting is off:
1. Press CLOCK/TIMER.
2. Press SET 3 times.
3. Press ∨ or ∧ to set the minute, and then press SET.

To display the clock again:
Press CLOCK/TIMER.
The clock display will appear for about 8 seconds.

For your reference:
When you turn OFF the system from the POWER button, the system goes on standby and the STANDBY indicator lights up.

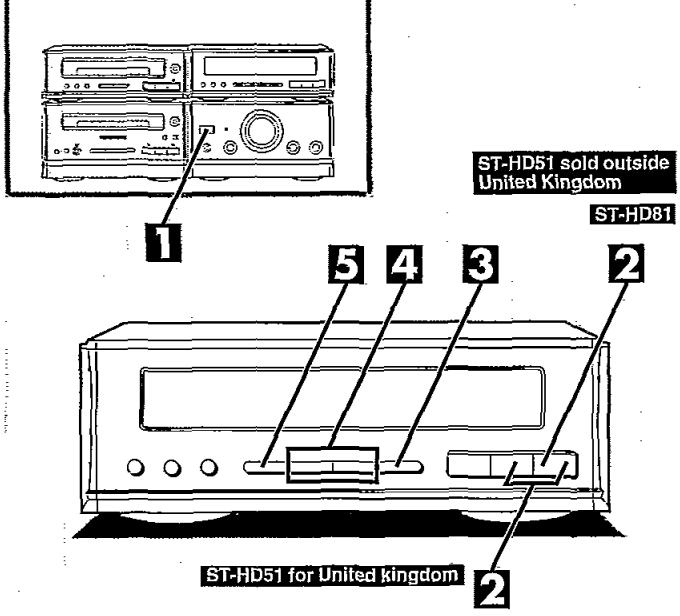
Memory presetting

- Once stations have been preset, you can easily select them from the tuner or the remote control.
- You can preset a total of 39 stations between the FM and AM bands.
- Stations can be set automatically or manually.

Automatic memory presetting

The frequencies are automatically preset (in sequence from lower to higher frequencies) into the memory: "channels" 1 to 39 are available for the presetting of FM stations and "channels" 21 to 39 are available for AM stations.

This example in the figure shows how to preset FM stations.



1 Switch on the power.

2 ST-HD51 sold outside United Kingdom / ST-HD81

Press FM/AM to select the desired band.

Each time you press FM/AM, "FM" and "AM" will appear alternately.

ST-HD51 for United Kingdom

Press FM or AM to select the desired band.

3 Press TUNING MODE to select "MANUAL".

Each time you press this button, "MANUAL" and "PRESET" will appear alternately.

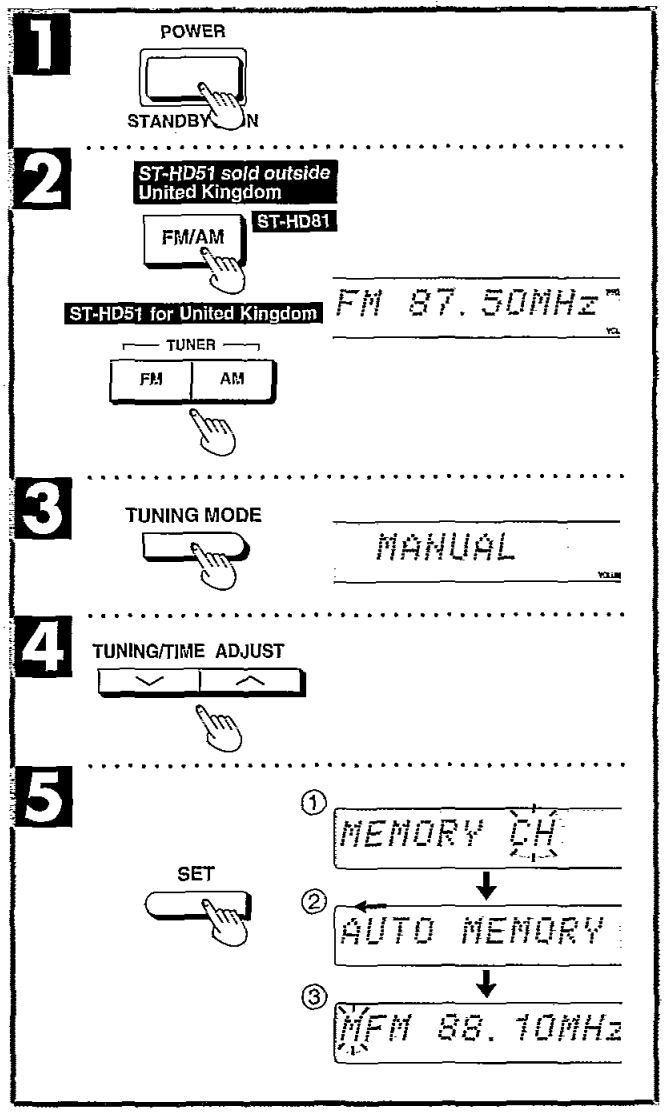
4 Press and hold ∨ or ∧ until the display shows the frequency from which you want to begin automatic memory presetting.

Press ∨ or ∧ momentarily to stop changing frequencies when the displayed frequency approaches the desired frequency. Tap ∨ or ∧ a few times until the desired frequency is reached.

5 Hold down SET.

Release your finger when the words "AUTO MEMORY" scroll across the display.

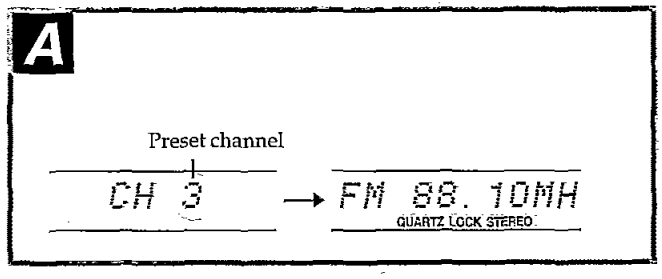
The "M" in the display will then flash while the tuner is storing the received frequency in memory. When storing is complete, "SET OK" will be displayed.



To confirm the preset stations: A

1. Press TUNING MODE to select "PRESET".
2. Press ∨ or ∧.

"QUARTZ LOCK": Lit when a station is picked up clearly
"STEREO": Lit when an FM stereo station is picked up

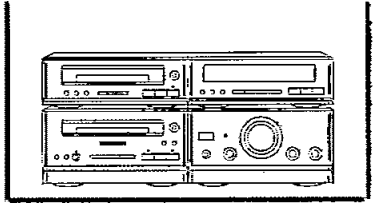


When "ERROR" appears:

Automatic memory presetting does not work when radio waves from the broadcasting station are too strong or too weak.
In such case, carry out presetting manually. (See page 12.)

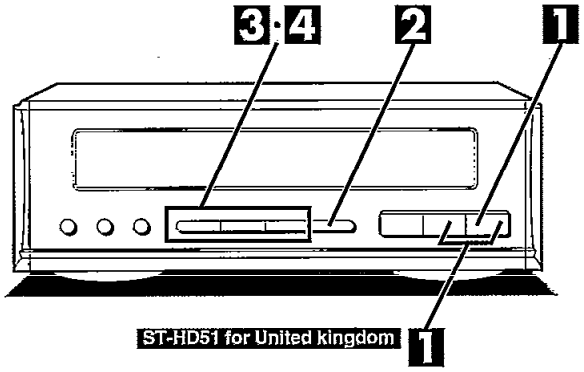
Note

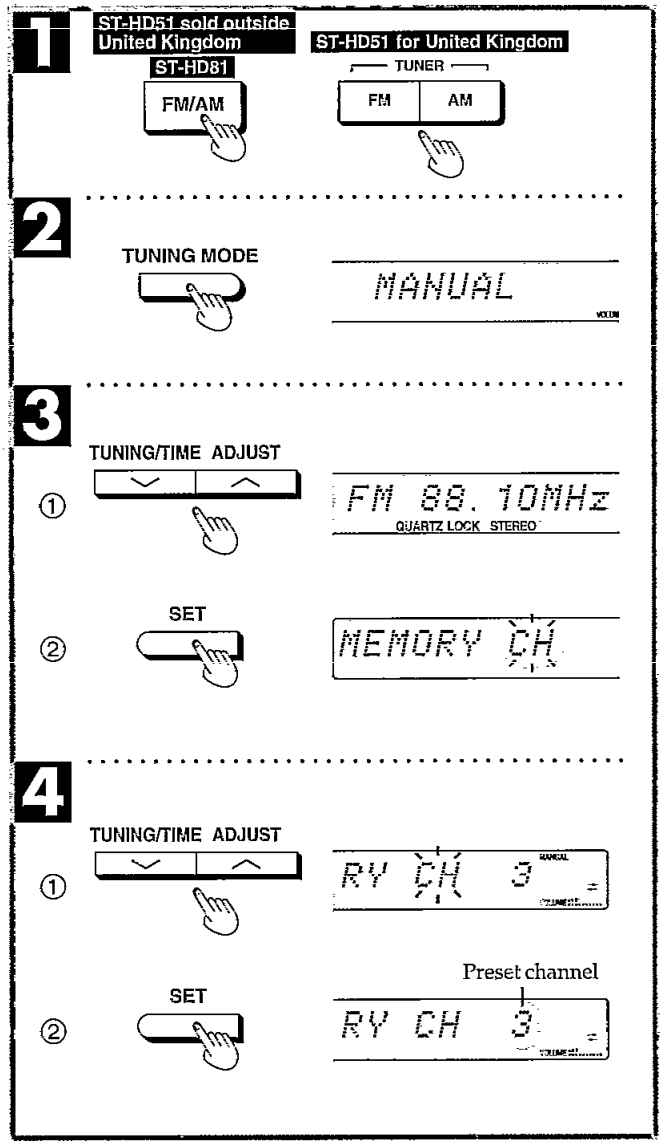
When you preset a broadcast station to a channel that has already been preset, the previous presetting will be erased. So if, for example, FM frequencies are preset from channel 1 to 39 and then AM frequencies are preset, the first AM frequency will be preset to channel 21 (thus erasing the FM presetting to channel 21), the seconds AM frequency will be preset to 22 (erasing FM 22), and so on.



ST-HD51 sold outside United Kingdom

ST-HD81





Manual memory presetting

This example in the figure shows how to memorize FM 88.10 MHz into preset channel 3.

1 ST-HD51 sold outside United Kingdom

ST-HD81

Press FM /AM to select the desired band.

Each time you press FM/AM, "FM" and "AM" will appear alternately.

ST-HD51 for United Kingdom

Press FM or AM to select the desired band.

2 **Press TUNING MODE to select "MANUAL".**

Each time you press this button, "MANUAL" and "PRESET" will appear alternately.

3 **① Press ∨ or ∧ to tune in the desired broadcast.**

"STEREO" lights when an FM stereo broadcast is being received. "QUARTZ LOCK" lights when you precisely tune in a broadcast station.

Automatic scanning:

Press and hold ∨ or ∧ until the displayed frequency begins to change.

- The changing of the displayed frequency will automatically stop if a broadcast station frequency is located during the tuning process.
- When there is excessive interference, the automatic scanning may not function.

To cancel the automatic scanning, press ∨ or ∧ once again.

② Press SET momentarily.

"CH" flashes.

4 **① Press ∨ or ∧ to select the desired preset channel.**

② Press SET momentarily.

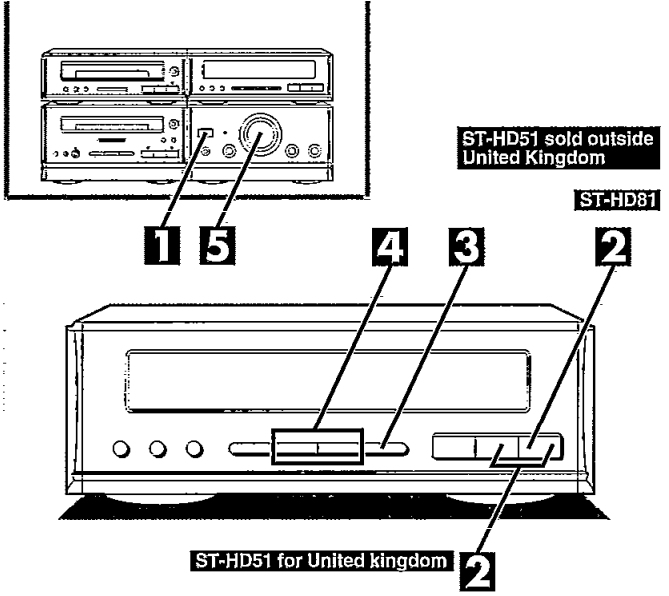
"CH" lights and the display returns to the frequency after about two seconds.

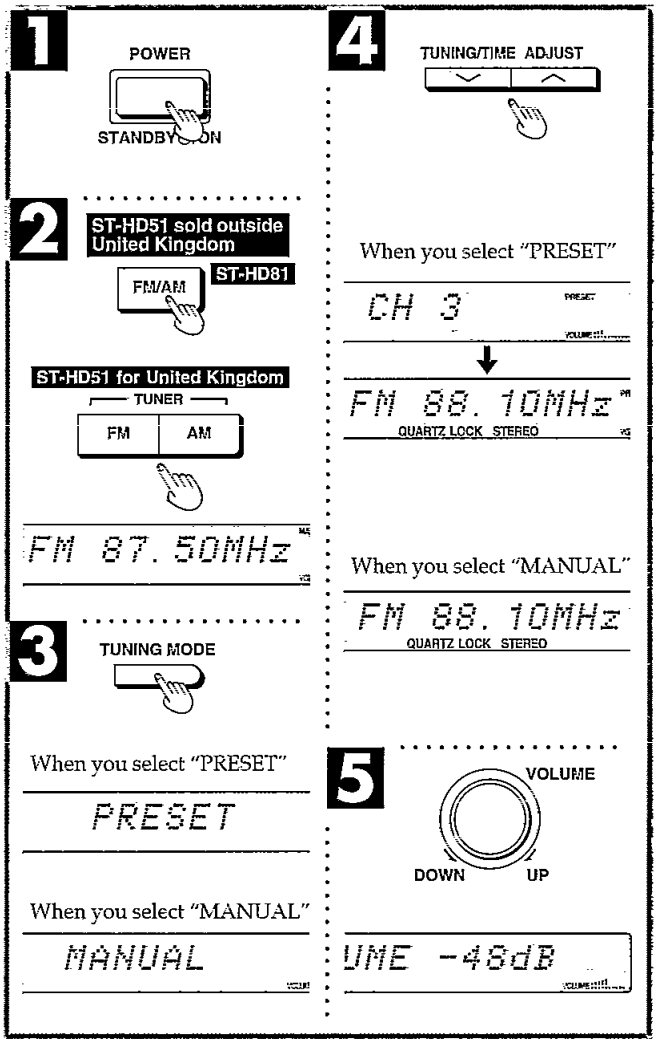
To continue presetting:

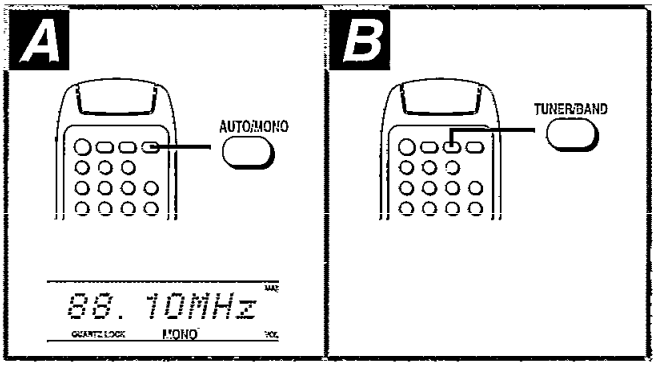
Repeat steps 1 through 4.

To preset FM stations in monaural position:

1. Select the desired frequency.
2. Press AUTO/MONO on the remote control. "MONO" will light.
3. Follow steps 3-② and 4 above.







Listening to radio broadcasts

Preparation
Before tuning, memorize a radio station (see pages 11–12).

1 Switch on the power.

2 ST-HD51 sold outside United Kingdom / ST-HD81

Press FM/AM to select the desired band.
Each time you press FM/AM, "FM" and "AM" will appear alternately.

ST-HD51 for United Kingdom
Press FM or AM to select the desired band.

3 Press TUNING MODE to select "PRESET" or "MANUAL".

Each time you press this button, "MANUAL" and "PRESET" will appear alternately.
- Select "PRESET" when stations are preset.
  (Refer to "Memory presetting" on page 11 or 12 to preset stations.)
- Select "MANUAL" when stations are not preset.

4 Press ∨ or ∧ to tune in the desired broadcast.

"STEREO" lights when an FM stereo broadcast is being received.
"QUARTZ LOCK" lights when you precisely tune in a broadcast station.

Automatic scanning (when you select "MANUAL" in step 3):
Press and hold ∨ or ∧ until the displayed frequency begins to change.
- The changing of the displayed frequency will automatically stop if a broadcast station frequency is located during the tuning process.
- When there is excessive interference, the automatic scanning may not function.

To cancel the automatic scanning, press ∨ or ∧ once again.

5 Adjust the volume level as you like.

For tuning by remote control (when you select "PRESET" in step 3 above):
Specify the channel you want with the numeric buttons (see page 41–42).
To select a two-digit channel:
Press ≥10 and then the two numbers you want within 10 seconds or so.

Note
When the FM station is preset to "MONO", the "STEREO" indicator will not light up even if a stereo broadcast is being received.

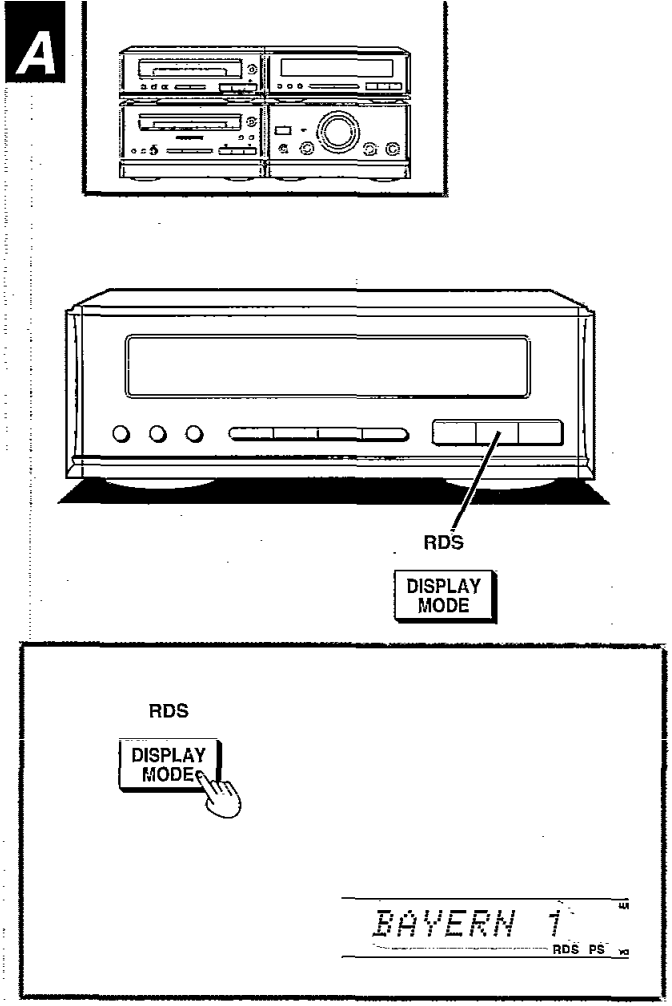
If noise is excessive in the FM stereo mode:
A

by remote control only

Press AUTO/MONO.
The sound reception mode switches to "MONO" (monaural) and "MONO" lights.
The sound will then be heard in monaural. If the broadcast signal is weak, or if there is a large amount of interference, you will get a clearer sound using MONO function.
To cancel the "MONO" mode, press the button again.
When "MONO" indicator goes off:
Use this setting for normal listening. Both stereo and monaural sounds can be heard as they are.

Note
If you change frequencies in the "MONO" mode, the "MONO" mode will be cancelled.

One-touch play B
When the system is OFF, you can receive the station last tuned in when you press TUNER/BAND on the remote control. The play will start with volume increasing gradually.



Enjoying RDS broadcasts

For SC-HD51 sold outside United Kingdom and SC-HD81

Available only from the main unit

This unit lets you take advantage of the Radio Data System (RDS) in areas where RDS broadcast services are received. This advanced system provides useful information, utilizing a 57 kHz subcarrier above the audible range, in addition to the main FM signal.

Types of RDS and functions

To display the name of a broadcast station (PS display):

When this system receives a PS signal in an RDS broadcast, the name of the broadcast station is shown on the display.

To search for a program of a particular type, such as news or sport (PTY search):

When you wish to listen to a particular type of program, a program of that type can be searched.
Furthermore, while the PTY signal is being received, the name of the type of program currently being broadcast can be shown on the dipslay.

Note

Even if an FM broadcast station is transmitting RDS signals, the functions of this system may not be able to utilize these signals if the signal quality is too poor.

"PTY" may not be available in some areas. (Future function)

To display the name of a broadcasting station

A

(When the FM station is received)

Press DISPLAY MODE.

If the FM broadcast being received provides the RDS service ("RDS" indicator will light), the name of the broadcast station and "PS" indicator will be shown on the display of this system.
Each time you press the button, the display will change as follows.

Frequency display→PS display→PTY display

(For PTY displays, see page 15.)

When "NO RDS" is displayed

If the FM broadcast being received does not provide RDS service, "NO RDS" will be displayed when the PS display mode or PTY display mode is selected.

Note

When receiving a broadcast station, in PTY mode, which does not transmit PTY, the display will not show "NO PTY" automatically. The same also applies to "NO RDS" when RDS is not transmitted.

To listen to a program of a particular type, such as news or sport (PTY search)

B

by remote control only

- The PTY search is carried out with respect to FM broadcast stations that have been preset into the memory. Make sure that "Memory presetting" on page 11 or 12 have been completed before carrying out a PTY search.
- Carry out this operation while tuning in an FM broadcast.

Note

"PTY" may not be available in some areas. (Future function)

1 Press PTY SELECT to select the desired program type.

Each time you press this button, the PTY display will change in sequence. (Refer to "About the PTY display" on the right.)

2 While PTY display is flashing (approx. 8 seconds)
Press SEARCH.

The PTY search will begin. ("PTY" will flash on the display.)

When the desired type of program is located:

The type of program is displayed for approximately 5 seconds and the program will automatically change to the broadcast station that has just been located.
To search for a different broadcast station, press the SEARCH once more while the type of program is displayed.

If the desired type of program is not found:

"NO PTY" will be displayed for approximately 5 seconds, and the program will return to the previous broadcast station.

Most-recent memory:

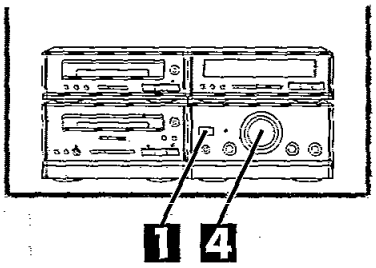
The most-recent memory system "remembers" the program type last selected when the unit was switched OFF. For example, if "SPORT" is selected and the system is turned OFF, when the PTY SELECT is pressed again, "SPORT" will be displayed.

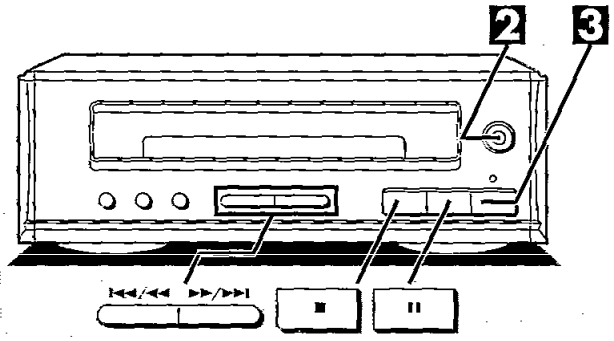
About the PTY display

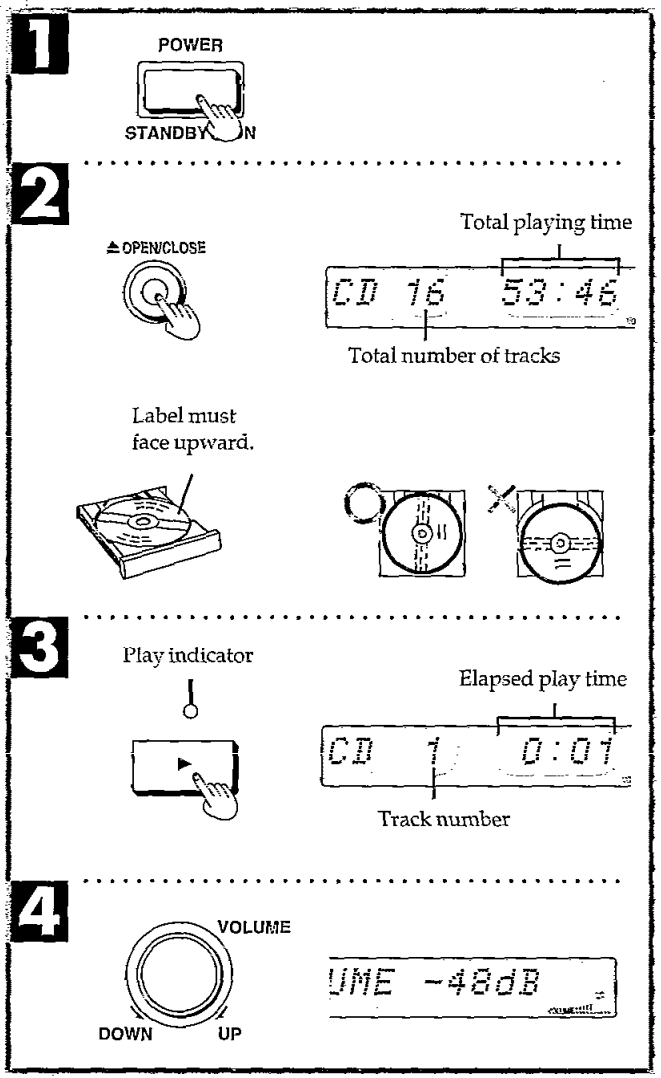
There are a total of 15 PTY displays on this unit. The display changes in order each time the PTY SELECT is pressed. The table shows the order in which the display changes, and also gives an explanation of each display.

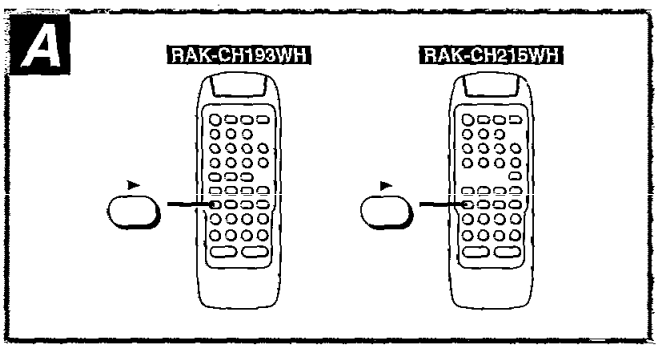
Display	Explanation
NEWS	Short accounts of facts, events and publicly expressed views, reportage and actuality.
AFFAIRS	Topical program expanding or enlarging upon the news, generally in different presentation style or concept, including documentary debate, or analysis.
INFO	Program whose purpose is to impart advice in the widest sense, including meteorological reports and forecasts, consumer affairs, medical help, etc.
SPORT	Program concerned with any aspect of sport.
EDUCATE	Program intended primarily to educate.
DRAMA	All radio plays and serials.
CULTURE	Programs concerned with any aspect of national or regional culture, including religious affairs, philosophy, social science, language, theatre, etc.
SCIENCE	Programs about the natural sciences and technology.
VARIED	Used for mainly speech-based programs, usually of a light-entertainment nature not covered by above categories. Examples are: quizzes, panel games, personality interviews, comedy and satire.
POP M	Commercial music which would generally be considered to be of current popular appeal, often featuring in current or recent record sales charts.
ROCK M	Contemporary modern music, usually written and performed by young musicians.
M.O.R.M	(Middle of the Road Music). Common term to describe music considered to be "easy-listening", as opposed to Pop, Rock or Classical. Music in this category is often, but not always, vocal, and usually of short duration (<5 min.).
LIGHT M	Classical Musical for general, rather than specialist, appreciation. Examples of music in this category are instrumental music and vocal or choral works.
CLASSICS	Performances of major orchestral works, symphonies, chamber music etc., and including Grand Opera.
OTHER M	Musical styles not fitting into any of the above categories. Particularly used for specialist music, of which Jazz, Rhythm & Blues, Folk, Country, and Reggae are examples.

After "OTHER M" is displayed, the display returns to "NEWS".









Listening to compact discs

For SC-HD51

Sequential play

1 Switch on the power.

2 Press ≜ OPEN/CLOSE to open the tray. Set a CD on the tray.

Press ≜ OPEN/CLOSE once again to close the tray.

When the "CD" input source is selected, total number of tracks and total playing time will appear on the display.

Note

The total playing time displayed when a disc is loaded includes intervals between tracks. This is why sometimes the displayed time is longer than that listed on the CD.

3 Press ►.

Play will start from the first track, and will stop automatically when the last track is finished.

4 Adjust the volume level as you like.

To stop the disc play:

Press ■.

To temporarily stop the disc play:

Press II. The play indicator flashes up green.
To play again, press ►.

When "CD NO DISC" display appears:

It indicates that a CD has not been inserted in the tray.

About play indicator:

While stopped: Lights up orange.
While playing: Lights up green.

For your reference:

If you press ► instead of ≜ OPEN/CLOSE after setting a CD, the tray will close and play will start directly from the track 1.

To search forward/backward:

Available only from the main unit

Hold down I◄◄/◄◄ or ►►/►►I during playback.
►►/►►I: To search forward
I◄◄/◄◄: To search backward

To skip forward/backward:

Press I◄◄/◄◄ or ►►/►►I.
►►/►►I: To skip forward
I◄◄/◄◄: To skip backward

Note

During random play, you can not skip to tracks which have already been played out. (page 17)

For your reference:

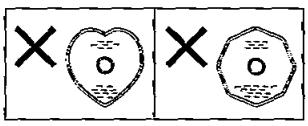
- During program play or random play, you can search-forward/backward only within the current track. (pages 17 and 18)
- During program play, skipping is always in the programmed order, whether forward or backward. (page 18)

One-touch play A

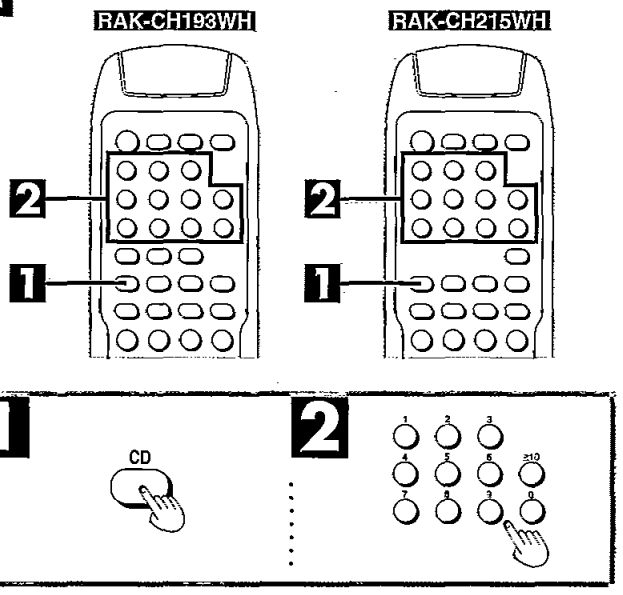
When the system is OFF, playing starts automatically when you press ► on the remote control.
The play will start with volume increasing gradually.

Note

- Do not use CDs with poorly attached labels or stickers. Adhesive protruding from underneath stickers or left over from peeled off stickers can cause your system to malfunction.
- Do not use irregular shape CDs (heart-shape, octagonal, etc.).



A



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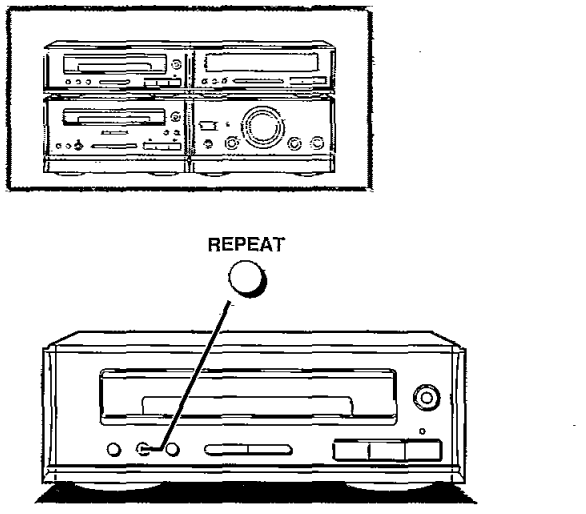

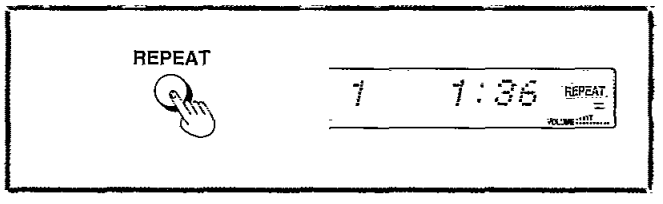

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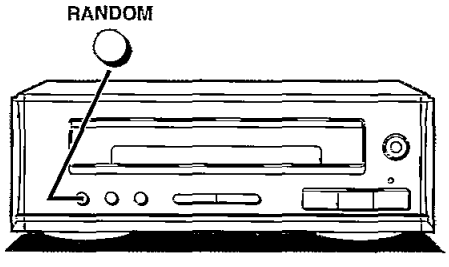
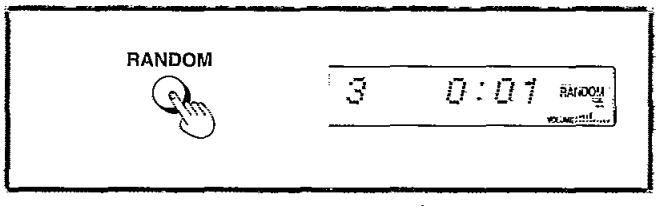




Direct access play

A

by remote control only

Direct access allows you to start sequential play from a specific track to the last track.

1 Press CD.

2 Press the numeric button(s) to select the desired track number.

The CD will be played from the selected track to the last track.
Play will stop automatically when the last track is finished.

To select a two-digit track:
Press ≥10 and then the two numbers you want within 10 seconds or so.

Repeat play

B

For United Kingdom: Available both from the main unit and the remote control
For others: Available only from the main unit

This function repeats the play of all tracks or programmed tracks.

Press REPEAT before or during play.
"REPEAT" will light.

To cancel repeat play:
Press REPEAT once again.
"REPEAT" will go out.

For your reference:
In program play mode (See page 18), the CD player will repeat only the programmed tracks. You can enjoy the same track over and over by programming only one track.

Random play

C

Available only from the main unit

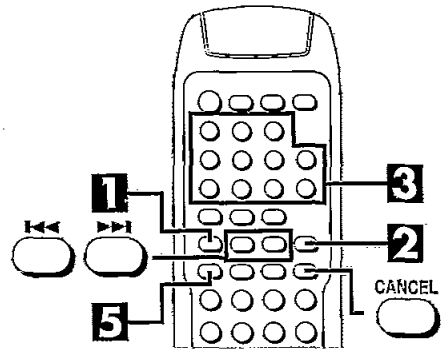
This function automatically selects a sequence of tracks to be played in random order.

Press RANDOM.
"RANDOM" will light, and then random play will start.
Play will stop automatically when all tracks on the disc finish playing randomly.

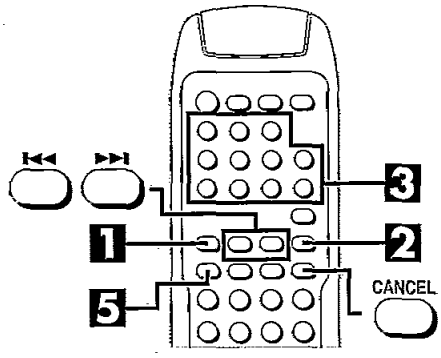
To cancel random play:
Press RANDOM once again.
"RANDOM" will go out. The CD player resumes the sequential play mode.

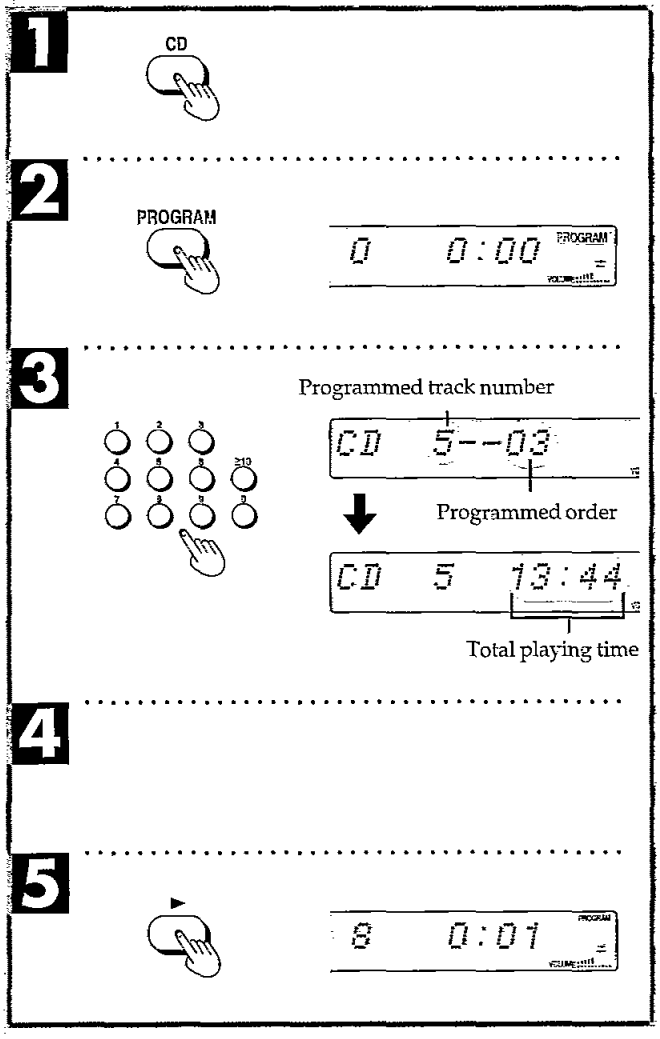
For your reference:
In the program play mode (See page 18), the programmed tracks will be played randomly.

RAK-CH193WH



RAK-CH215WH





Program play

by remote control only

This function allows you to program up to 24 tracks.

1 Press CD.

2 Press PROGRAM.
"PROGRAM" will light.

3 Press the numeric button(s) to select the track you want to play in the desired sequence.

To select a two-digit track:
Press ≥10 and then the two numbers you want.

4 Repeat step 3 until you have programmed all the tracks you want.

5 Press ▶.
Play will start in the programmed sequence.
When all the programmed tracks have been played, the CD player will stop automatically.

To cancel program play mode:
Press PROGRAM.
"CLEAR" will appear on the display for approximately 1 second and all the programmed tracks will be cancelled.

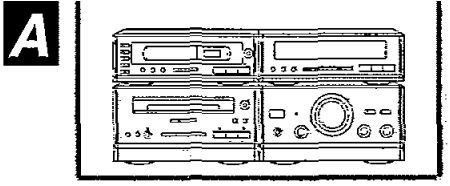
When "FULL" appears:
The number of programmed tracks is limited to 24. No further tracks can be programmed.

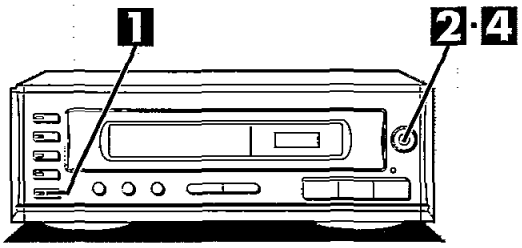
When "––:––" appears:
The total playing time of the programmed tracks has exceeded 99 minutes 59 seconds, or you tried programming track number 25 or more. In either case, you can still program and play the disc.

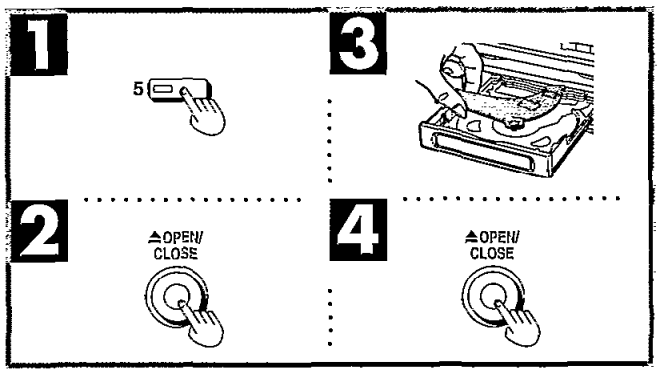
You can do the following during program play.

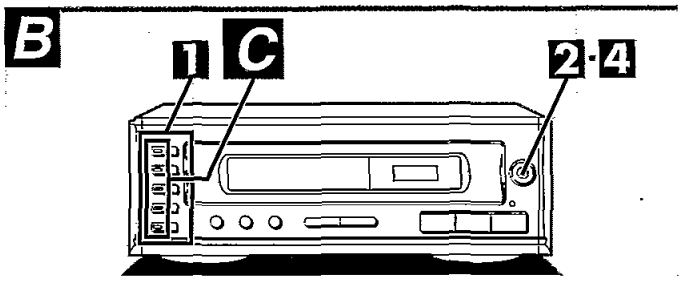
- **Check program contents**
  Press |◀◀ or ▶▶| while play is stopped. Every time you press one of the buttons, the track No. and program No. are shown on the display.
- **Add to the program**
  Repeat step 3.
- **Cancel entries**
  A specific track only:
  ① Press CANCEL. "CANCEL" will light.
  ② Press the numeric button(s) of the track you want to cancel, or press |◀◀ or ▶▶| to select the track you want to cancel and then press CANCEL.
  ③ Press CANCEL once again. "CANCEL" goes out.
  All tracks:
  Press PROGRAM, or press ■ while play is stopped.

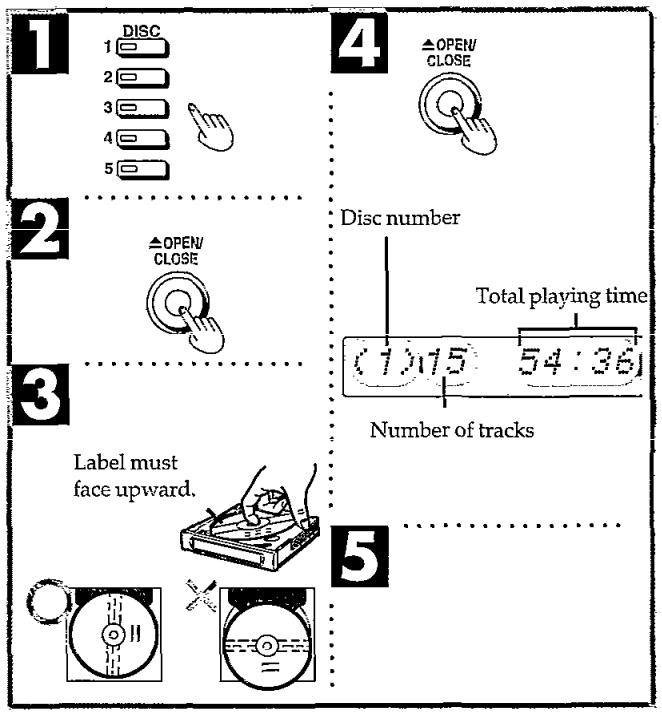
For your reference:
As long as you do not clear the program, the system will retain the programmed tracks in memory for as long as 2 weeks while the system is OFF.

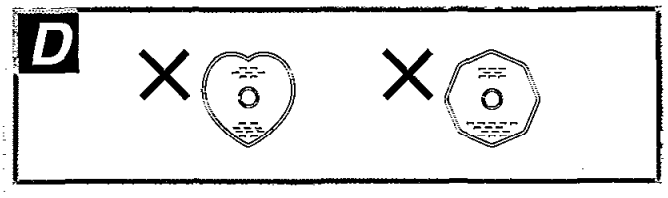












Loading CDs

Always stop the changer before loading or changing CDs. You cannot change CDs while a disc is playing.

Note

You can not use 8 cm CDs on this unit.

Removing the shipping spacer A

A spacer is inserted inside tray 5 of the CD changer to protect the trays during transport.
Be sure to take the spacer out before using your changer.

1 Press DISC 5.

2 Press ≜ OPEN/CLOSE.
The tray 5 will open.

3 Take out the shipping spacer.

4 Press ≜ OPEN/CLOSE.
The open tray will close.

Note

Conserve the shipping spacer for the next time you move the changer.

How to load CDs B

1 Press DISC 1–5, whichever you want to open.

2 Press ≜ OPEN/CLOSE.

3 Set the CD in the tray.

4 Press ≜ OPEN/CLOSE.
The open tray will close.

5 To load other CDs, repeat steps 1 through 4.

Disc indicators C

When you open or close a tray with the ≜ OPEN/CLOSE button, the changer automatically detects whether there is a CD in the tray or not. The indicator will act as follows.

■ (orange)	There's a CD in the tray.
Out	There isn't a CD in the tray.

While the CD is playing, its indicator is green.

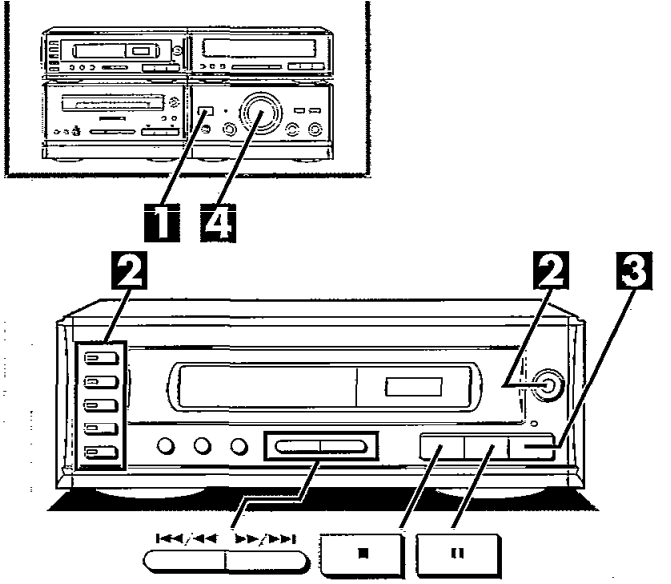
For your reference:

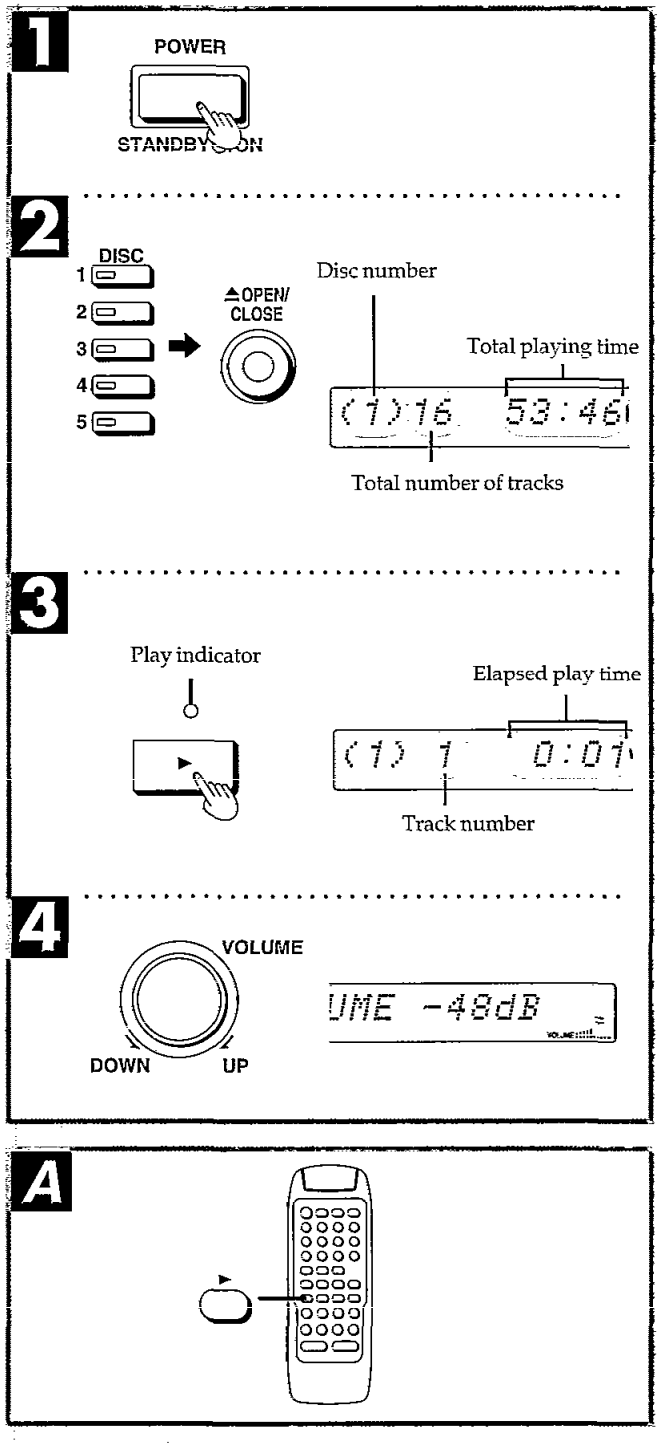
- *While the CD changer is changing a disc, the indicator of the selected disc is green and flashes.*
- While opening/closing a tray with the ≜ OPEN/CLOSE button, the indicator of the selected disc is orange and flashes.

To prevent damage

Always observe the following points.

- Load only 1 CD per tray.
- Set the system on a flat, level surface.
  Do not set it on top of magazines, inclined surfaces, etc.
- Do not move the system while trays are opening/closing, or when loaded. Always unload all trays before moving the system.
- Do not put anything except CDs in trays.
- Do not use cleaning CDs or CDs which are badly warped or cracked.
- Do not use CDs with poorly attached labels or stickers. Adhesive protruding from underneath stickers or left over from peeled off stickers can cause the system to malfunction.
- Do not use irregular shape CDs (heart-shape, octagonal, etc.). D





Sequential play

1 Switch on the power.

2 Insert CDs in the trays.
(For details, see page 19.)
When the "CD" input source is selected, disc number, total number of tracks, and total playing time will appear on the display.

Note
The total playing time displayed when a disc is loaded includes intervals between tracks. This is why sometimes the displayed time is longer than that listed on the CD.

3 Press ►.
The changer will automatically play all tracks on all discs. It will start from the first track on the disc shown on the display, and will continue until playing the last track of the final disc (see below).

4 Adjust the volume level as you like.

To stop the disc play:
Press ■.

To temporarily stop the disc play:
Press ❚❚. The play indicator flashes up green.
To play again, press ►.

What is meant by "final disc"?:
For example, if play starts from disc 4, disc 3 will be the "final disc".
Order of progression:
Disc 4→5→1→2→3

About play indicator:
While halted: Lights up orange.
While playing: Lights up green.

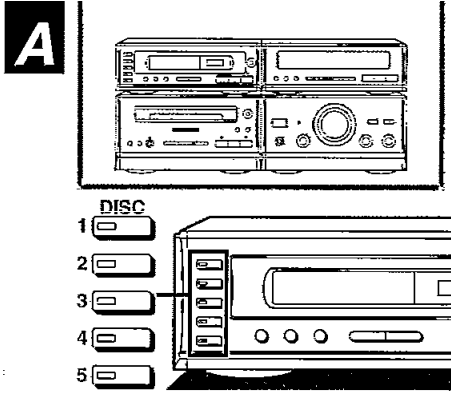
For your reference:
If you press ► instead of ≜ OPEN/CLOSE after inserting a CD, the tray will close and play will start directly from the track 1.

To pause	Press ❚❚ during playback. To resume playback, press ►.
To search forward/ backward **Available only from the main unit**	Hold down during playback. ⌈I◄◄/◄◄⌋⌈►►/►►I⌋ (Backward) (Forward)
To skip forward/ backward	Press. ⌈I◄◄/◄◄⌋ ⌈►►/►►I⌋ (Backward) (Forward)

Note
During random play, you can not skip to tracks which have already been played out. (page 21)

For your reference:
- During program play or random play, you can search-forward/ backward only within the current track. (pages 21 and 22)
- During program play, skipping is in always in the programmed order, whether forward or backward. (page 22)

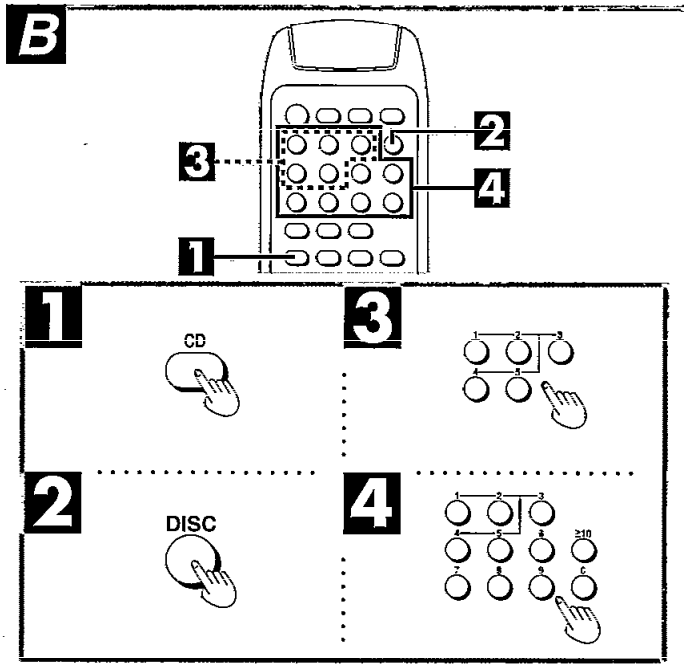
One-touch play A
When the system is OFF, playing starts automatically when you press ► on the remote control.
The play will start with volume increasing gradually.



Direct access play

To listen to a favorite CD A

Press DISC 1–5, whichever disc you want. The selected CD will be played from the first track to the last (page 20).
Playback will stop automatically when the last track is finished.



To listen to a favorite track B

by remote control only

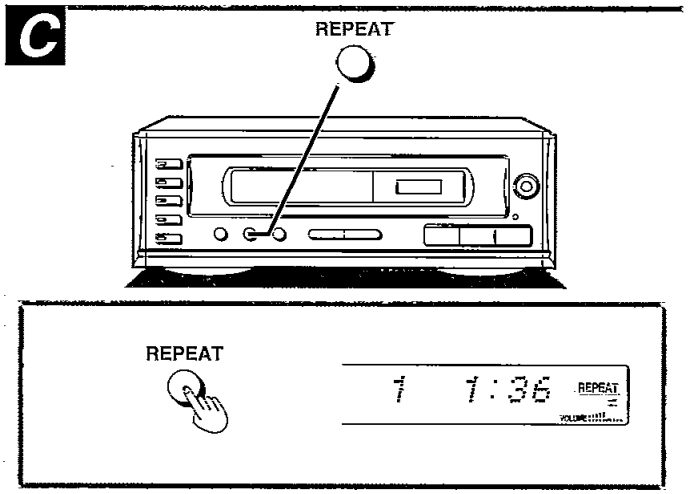
1 Press CD.

2 Press DISC.

3 (within 10 seconds or so)
Press DISC 1–5, whichever disc you want.

4 Press the numeric button(s) to select the desired track number.
The CD will be played from the selected track to the last (page 20).
Playback will stop automatically when the last track is finished.

To select a two-digit track:
Press ≥10 and then the two numbers you want within 10 seconds or so.



Repeat play C

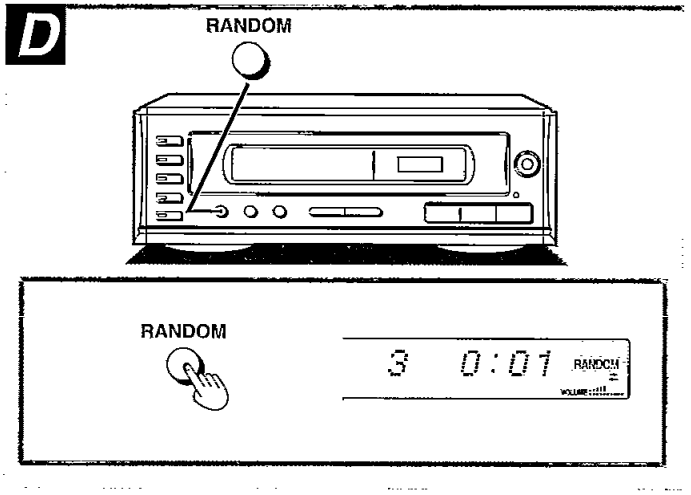
Available only from the main unit

This function repeats the play of all tracks.

Press REPEAT before or during play.
"REPEAT" will light.

To cancel repeat play:
Press REPEAT once again.
"REPEAT" will go out.

For your reference:
In program play mode (See page 22), the CD changer will repeat only the programmed tracks. You can enjoy the same track over and over by programming only one track.



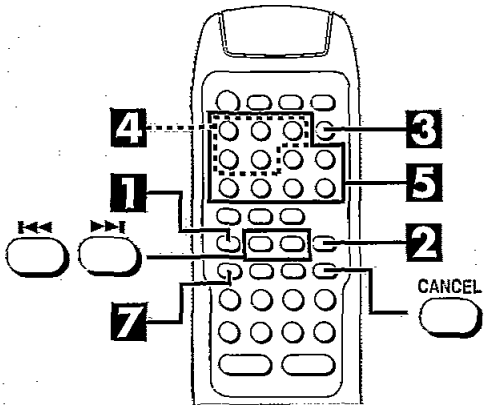
Random play D

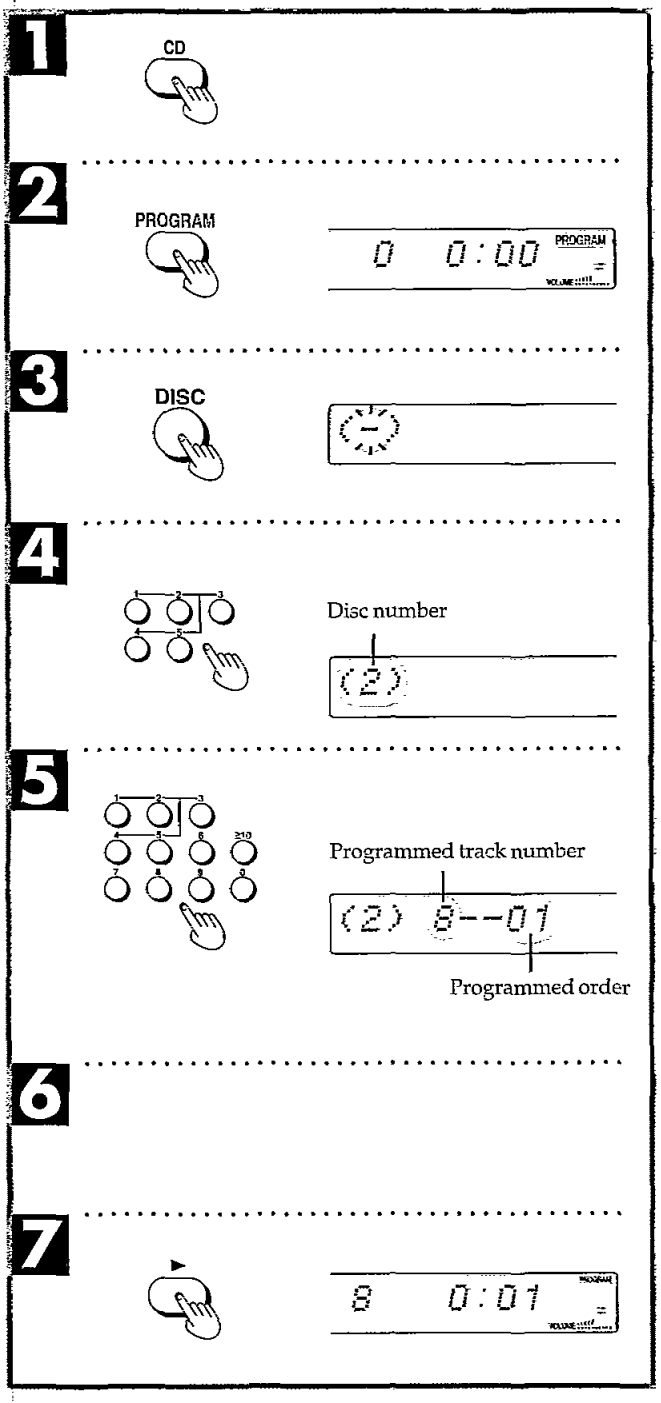
Available only from the main unit

Press RANDOM.
"RANDOM" will light, and then random play will start.
Play will stop automatically when all tracks on all of the discs finish playing randomly.

To cancel random play:
Press RANDOM once again.
"RANDOM" will go out. The CD changer resumes the sequential play mode.

For your reference:
In the program play mode (See page 22), the programmed tracks will be played randomly.





Program play

by remote control only

This function allows you to program up to 24 tracks.

1 Press CD.

2 Press PROGRAM.

3 Press DISC.

4 (within 10 seconds or so)
Press DISC 1–5, whichever disc you want.

5 Press the numeric button(s) to select the track you want to play in the desired sequence.

To select a two-digit track:
Press ≥10 and then the two numbers you want.

6 Repeat steps 3 through 5 until you have programmed all the tracks you want.

7 Press ▶.
Play will start in the programmed sequence.
When all the programmed tracks have been played, the changer will stop automatically.

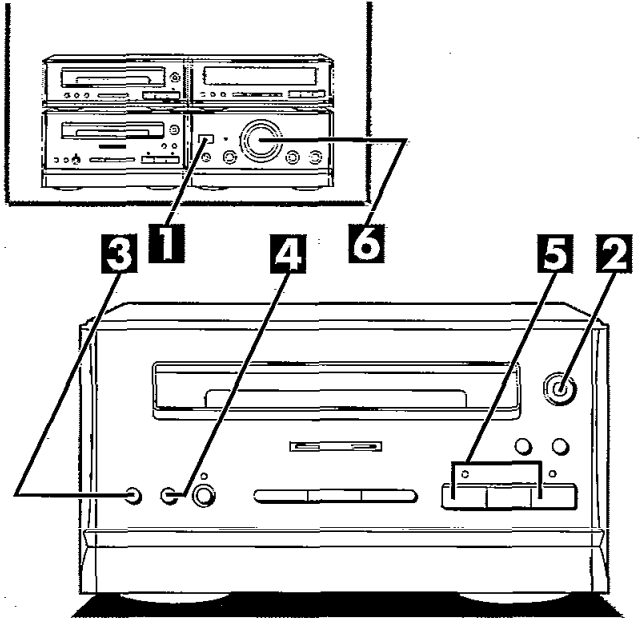
To cancel program play mode:
Press PROGRAM.
"CLEAR" will appear on the display for approximately 1 second and all the programmed tracks will be cancelled.

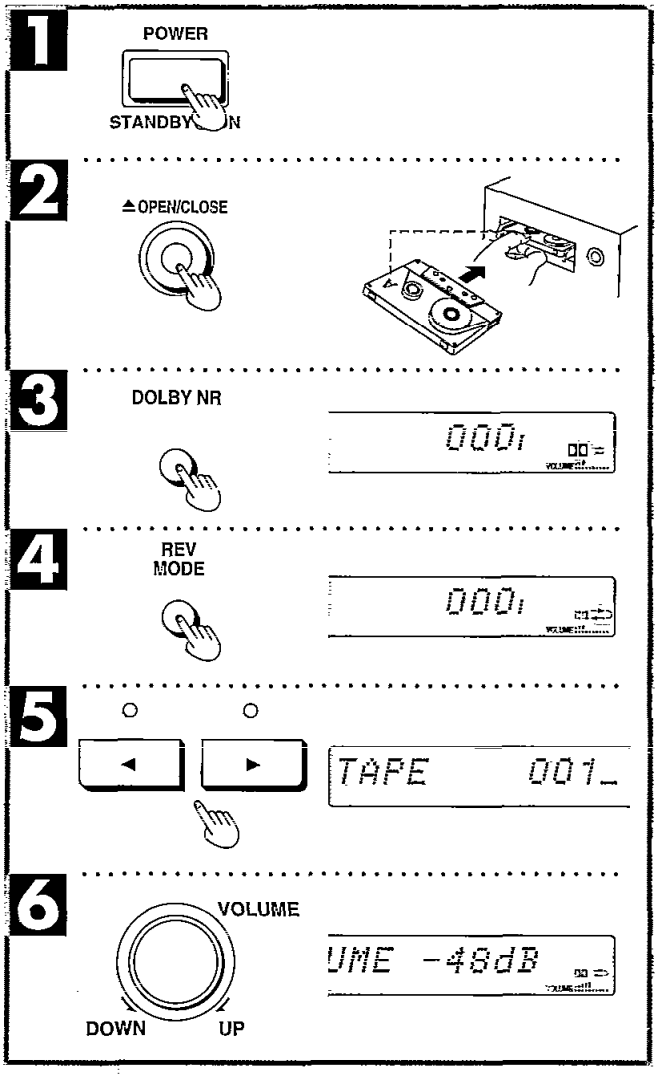
When "FULL" appears:
The number of programmed tracks is limited to 24. No further tracks can be programmed.

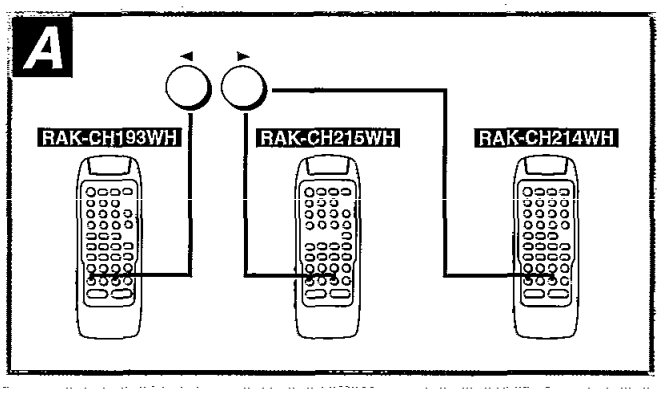
When "––:––" appears:
The total playing time of the programmed tracks has exceeded 99 minutes 59 seconds, or you tried programming track number 25 or more, or you tried programming a disc not in playing position. In any case, you can still program and play discs.

You can do the following during program play.

- **Check program contents.**
  Press |◀◀ and ▶▶| while play is stopped. Every time you press one of the buttons, the track and program No. are shown on the display.
- **Add to the program.**
  Repeats steps 3 through 5.
- **Cancel entries.**
  A specific track only:
  ① Press CANCEL. "CANCEL" will light.
  ② Press the numeric button(s) of the track you want to cancel, or press |◀◀ or ▶▶| to select the track you want to cancel and then press CANCEL.
  ③ Press CANCEL once again. "CANCEL" goes out.
  All tracks:
  Press PROGRAM, or press ■ while play is stopped.







Playback

Type of tape which can be played correctly:
The unit automatically identifies the type of tape.

Normal position/TYPE I	○
High position/TYPE II	○
Metal position/TYPE IV	○

1 Switch on the power.

2 Press ▲ OPEN/CLOSE on deck, and then insert the tape.
Load a tape with the exposed side facing the cassette holder's insertion part.
Insert the cassette tape until it touches the back of the compartment.
Press ▲ OPEN/CLOSE once again to close the cassette holder.

Note
Keep your fingers out of the cassette tray so that you do not get pinched when it closes.

3 To listen to a tape recorded in Dolby B NR
Press DOLBY NR and check "DD"is displayed.
When playing back a tape which was not recorded on Dolby NR system, press DOLBY NR so that indications go off.

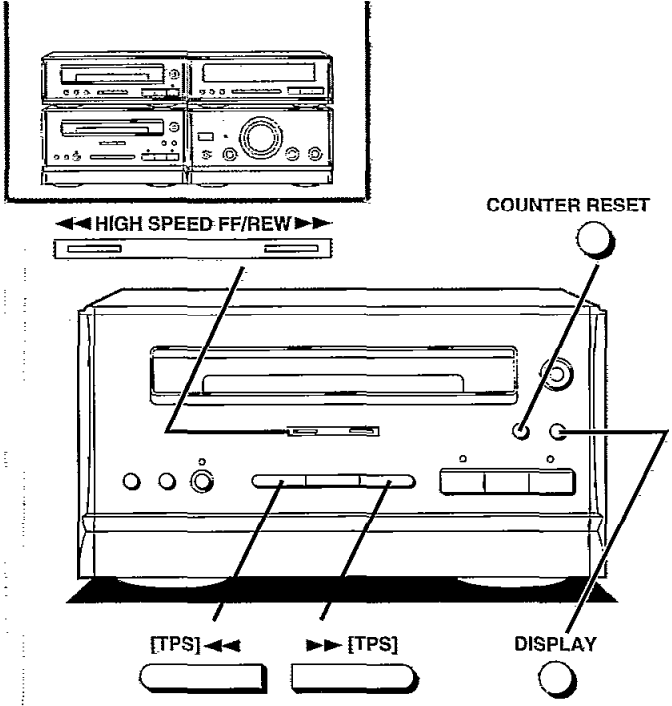
4 Press REV MODE to select the reverse mode.
Each time you press REV MODE, one of the indicators will appear.
⇄: The deck plays one side only, and then stops automatically.
⇄D: The deck plays both sides, and then stops automatically.
C⇄D: The deck plays both sides 8 times, and then stops automatically.

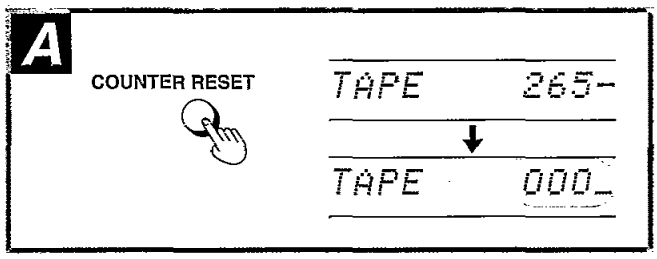
5 Press ◄ or ►.
►: The forward side will play.
◄: The reverse side will play.

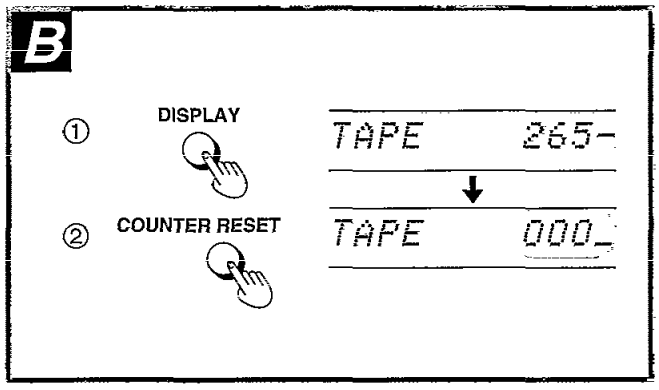
6 Adjust the volume level as you like.

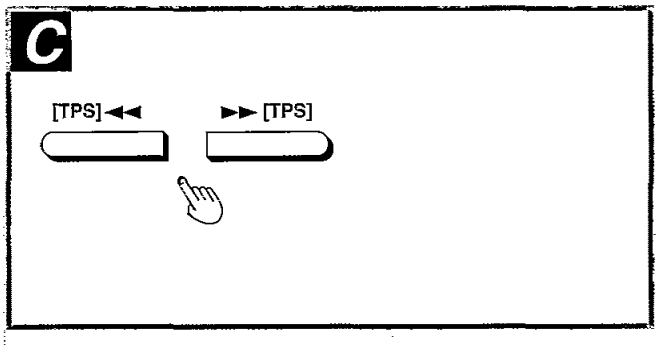
To stop tape playback:
Press ■.

One-touch play A
When the system is OFF, playing starts automatically when you press ◄ or ► on the remote control.
The play will start with volume increasing gradually.









To reset the tape counter

A

Press COUNTER RESET.

When the tuner or CD mode display shows, the tape counter display will appear for about 1 second.

To reset the tape counter while listening to or recording from CDs or the radio E

① Press DISPLAY.

② Press COUNTER RESET while the tape counter is being displayed (displayed for approximately 5 seconds).

For your reference:

- When the tape is travelling in the reverse direction, the value displayed on the tape counter will count down.
  After "000_" is reached, the display will switch to "999_" and then continue counting down.
- *It is useful—for example—to reset the counter when recording from the middle of tapes. The number lets you know roughly where you started from.*

About the playback indicators:

While halted, fast forwarding, or rewinding:
Lights up orange.
While playing or recording:
Lights up green.
While finding the beginning of a program or recording is on standby:
Flashes green.

To fast forward or rewind the tape

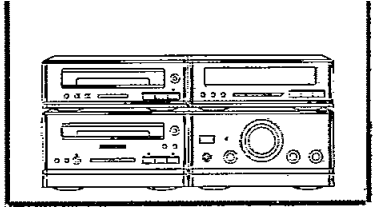
C

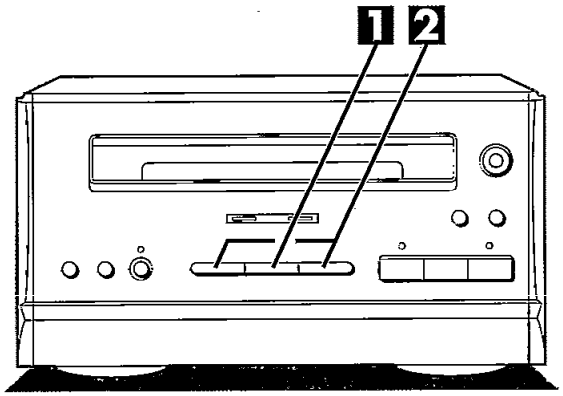
Press [TPS] ◄◄ or ►► [TPS] while the tape is in the stop mode.

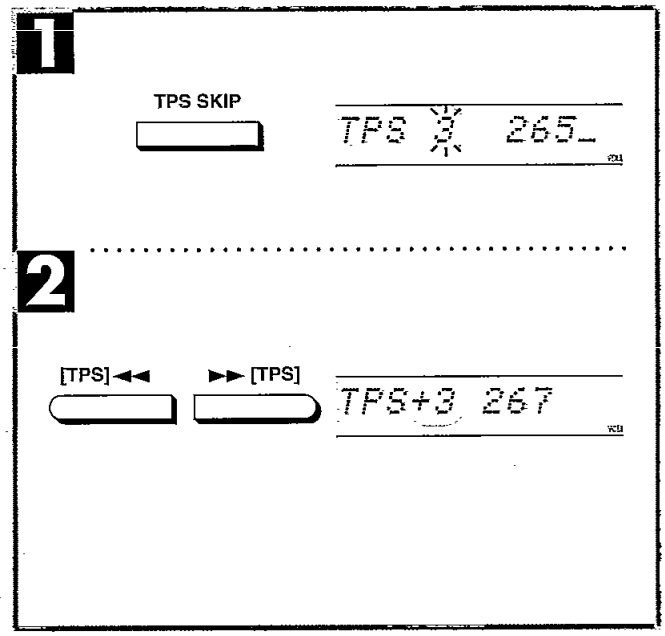
Tape direction	To rewind	To fast-forward
►	[TPS] ◄◄	►► [TPS]
◄	►► [TPS]	[TPS] ◄◄

Hi-speed fast-forward/rewind

This cassette deck is designed to roughly double fast-forward/rewind speed automatically.
When you fast-forward from the beginning of the tape or rewind from the end of it, the tape runs at high speed and the HIGH SPEED FF/REW lamp flashes.
When reaching the end of the tape, the deck automatically drops to normal speed.







To find the beginning of a program (TPS: tape program sensor)

The number of programs corresponding to the number of times TPS SKIP was pressed will be skipped, and the desired program is located (up to 9 programs before or after the program now heard).

1 Press TPS SKIP until selecting the numbers of tracks you want to skip.

Each time you press this button, the display will change as follows:

TPS 1→2→3...8→9→TAPE

2 Press [TPS] ◄◄ or ►► [TPS].

If the forward side (►) is playing:

►► [TPS]: Skips forward by the number of tracks corresponding to the number you select in step 1. ("+" lights.)

[TPS] ◄◄: Skip backward by the number of tracks corresponding to the number you select in step 1. ("−" lights.)

When you select "TPS 1", the deck will skip back to the beginning of the track you are currently listening to and will start playing it again.

The illustration shows an example when you select "TPS 3" while the forward side (►) is playing.

If the reverse side (◄) of the tape is playing:

The reverse operation will take place.

Notes

- To change the setting (the number of the programs to be skipped, the tape travel direction, etc.) while TPS skip is activated, press ■ to stop the deck first.
- If the number of TPS skips specified is larger than the number of songs recorded on the tape, the unit may stop at the end of the tape or otherwise fail to operate correctly.

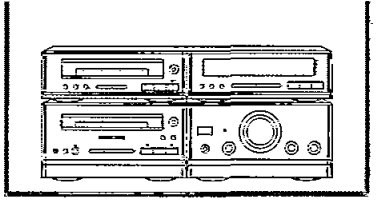
For your reference:

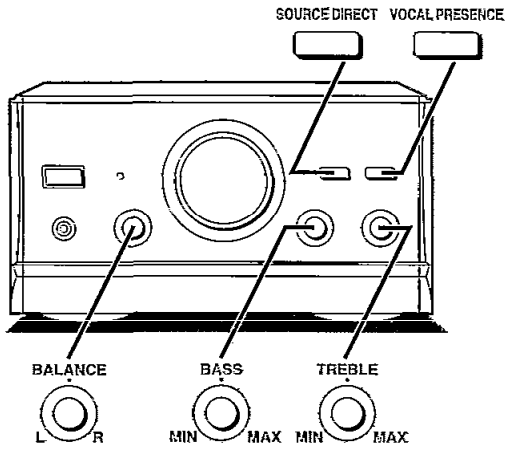
To skip to the next track or back to the beginning of the track you are currently listening to, perform only above step 2.

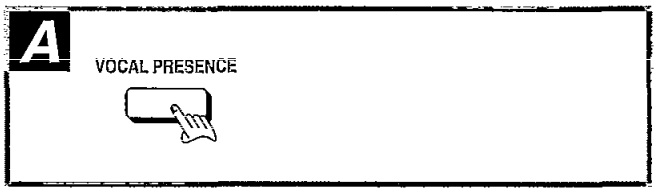
Notes

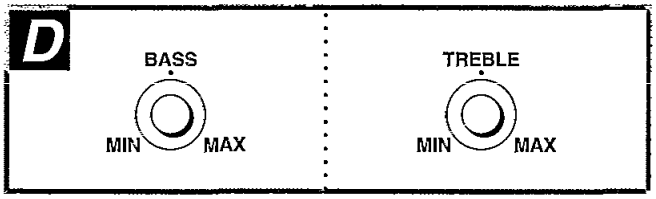
TPS is the function that searches for the silent passage in a tape program. So, it may sometimes fail to operate correctly in the following situations:

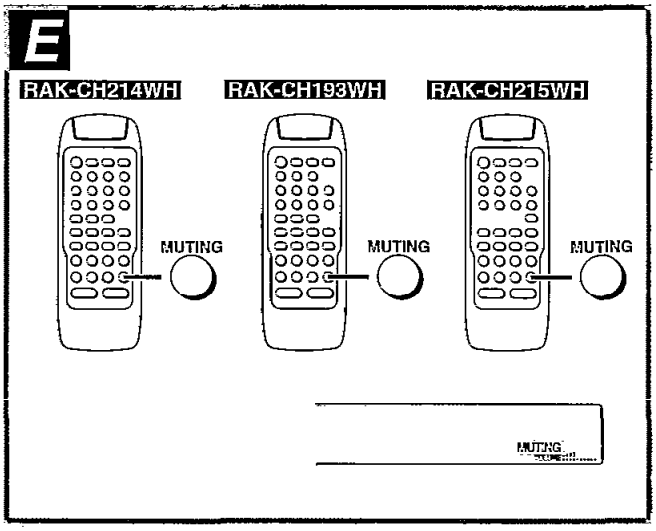
- When the interval between programs is less than 4 seconds
- When there is a particular low-level passage in a program (for example, classical music)
- When the program is less than 10 seconds, or when it is less than 10 seconds from the listening point to the beginning of the next tune
- When a tape recorded with fade-ins or fade-outs











Changing the tone

Listening with Vocal Presence A

ST-HD81 only

Press VOCAL PRESENCE.
The button will light up. Vocal Presence accentuates midrange sounds to make voices stand out. (Vocal Presence cannot be used at the same time as SOURCE DIRECT.)

To cancel
Press VOCAL PRESENCE again.

For clearer sound B

ST-HD81 only

Press SOURCE DIRECT.
The button will light up. Voice signals will not be fed through the tone control circuit, so you get a clearer sound. (You cannot adjust BASS or TREBLE when using SOURCE DIRECT.)

To cancel
Press SOURCE DIRECT again.

To adjust the sound balance C

Turn BALANCE to adjust the left/right sound balance.

Note
The effect works only with playback. It cannot be used in recording.

To adjust the tone quality D

Turn BASS to adjust the low-frequency sound.

Turn TREBLE to adjust the high-frequency sound.

Note
The effect works only with playback. It cannot be used in recording.

Convenient functions

To mute the volume E

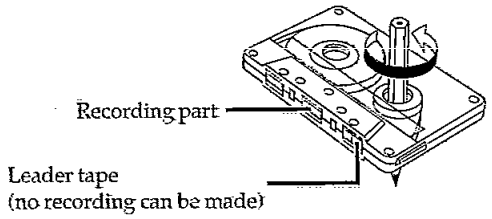
This feature is convenient when you have a telephone call, etc.

by remote control only
Press MUTING.
"MUTING" will light.

To cancel, press MUTING once again. ("MUTING" goes out.)

To cancel from the amplifier, reduce the volume level to the minimum position (–– dB) and then reset to the desired volume.
Muting is also canceled if you turn OFF the system.

A



Type of tape which can be recorded correctly

The unit automatically identifies the type of tape.

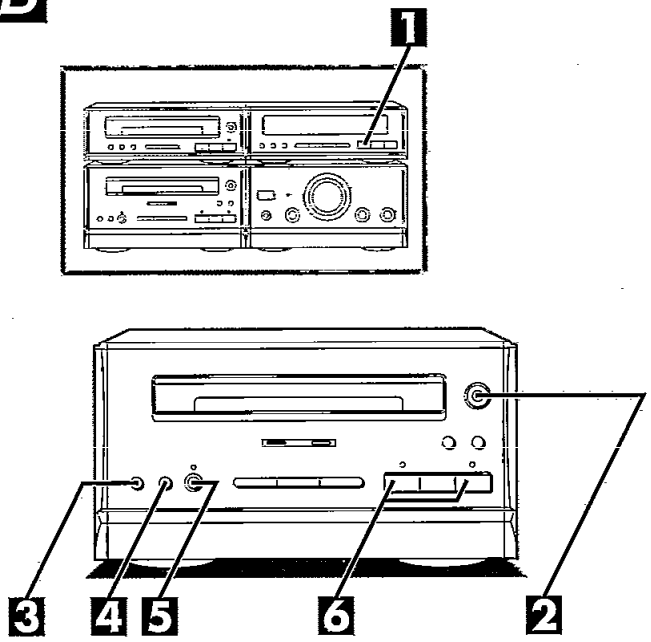
Normal position/TYPE I	O
High position/TYPE II	O
Metal position/TYPE IV	O

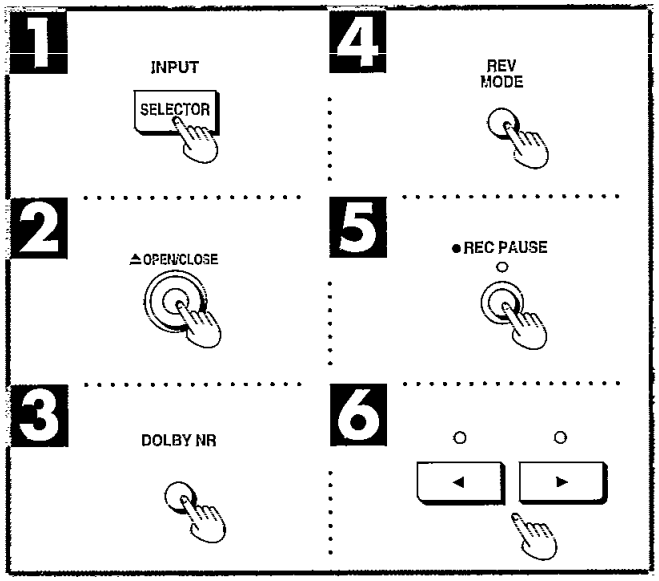
How to advance the leader tape

A

Wind the leader tape forward so that recording can start as soon as you press the button. But, this is not necessary if one-touch editing from CDs.

B





About Dolby noise-reduction system

The Dolby noise-reduction system is designed to effectively reduce the annoying high-frequency "hissing" noise typical of cassette tapes. During recording, the system functions to increase the high-frequency sound level, the sound, and then, during playback, that same portion is weakened to bring it back to the previous level. This unit is equipped with the Dolby B NR-type.

Dolby B-type noise reduction:

Noise is reduced to about one-third.
Use this system when playing back tapes recorded by the Dolby-B noise-reduction system, such as prerecorded music tapes, etc.

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol ◻◻ are trademarks of Dolby Laboratories Licensing Corporation.

Volume and sound quality in recording

Changes to volume or sound quality are not recorded on tapes at all.

To erase recorded sounds

B

1 **Press INPUT SELECTOR on the tuner to select "TAPE".**

2 **Insert the recorded tape into deck.**

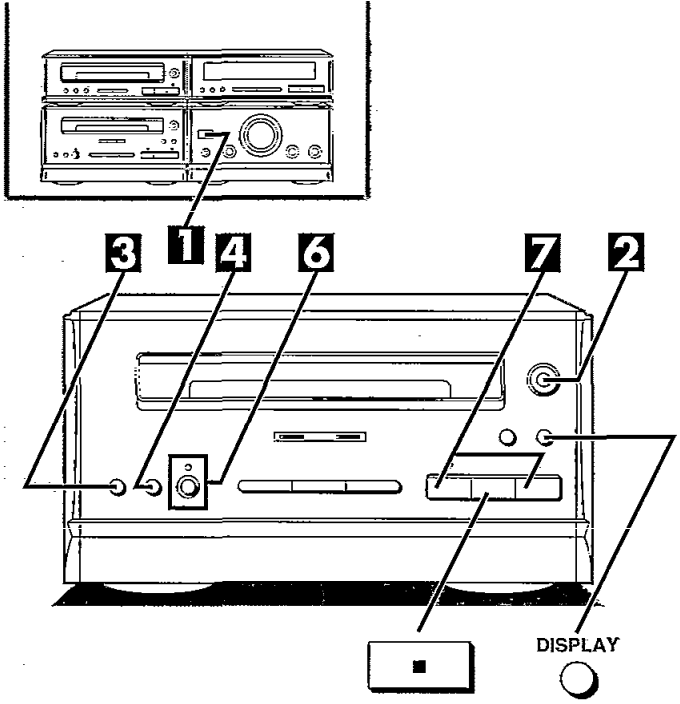
3 **Press DOLBY NR so that the Dolby NR indicator is off.**

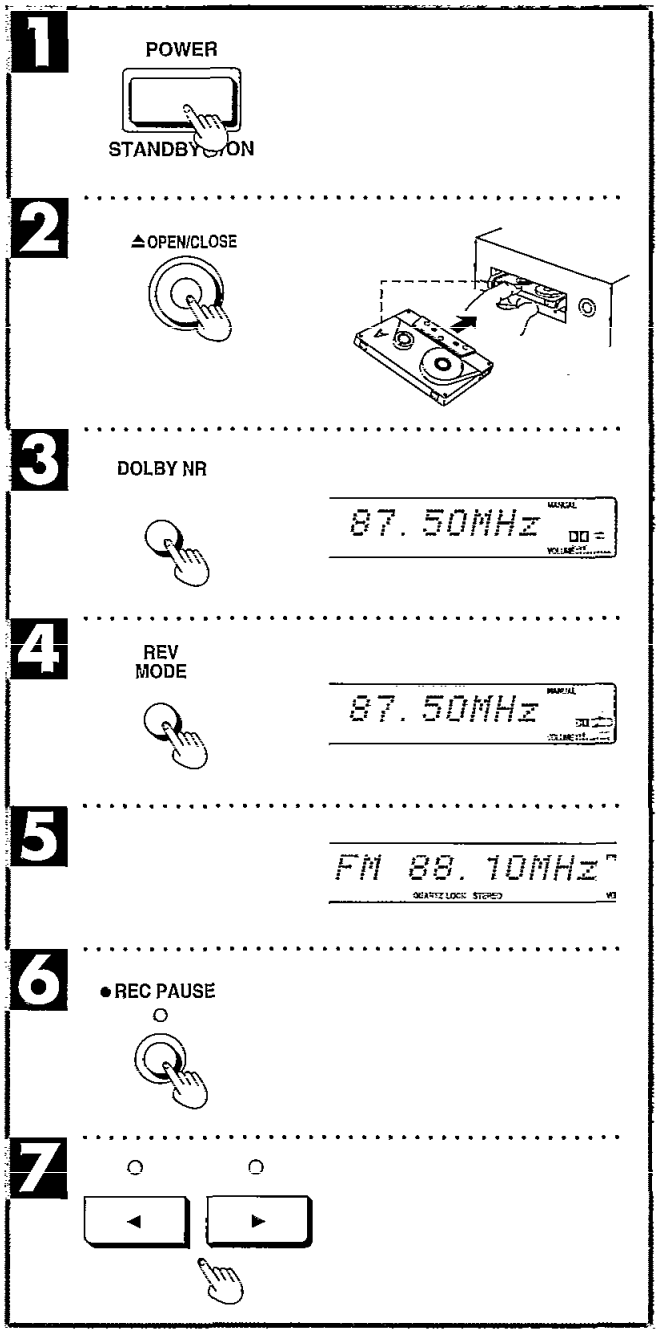
4 **Press REV MODE to select reverse mode.**

5 **Press ● REC PAUSE.**
REC PAUSE indicator will light.

6 **Press ◄ or ►, whichever side you want to erase.**

Your attention is drawn to the fact that recording prerecorded tapes or discs or other published or broadcast material may infringe copyright laws.





Recording from radio broadcasts

Preparation:
Advance the tape to a point from where recording can start immediately.

1 Switch on the power.

2 Press ≜ OPEN/CLOSE on deck, and then insert the tape with the exposed part of the tape facing inward.
Insert the cassette tape until it touches the back of the compartment.
Press ≜ OPEN/CLOSE once again to close the holder.

3 To record in Dolby B NR:
Press DOLBY NR and check "DD" is displayed.

4 Press REV MODE to select the reverse mode.
⇄: One side will record, and then the tape will stop automatically at the tape end.
⇄⊃: Both sides will record (forward side→reverse side), and then the tape will stop automatically at the tape end.
C⇄⊃: Same as above (When you press ● REC PAUSE, "C⇄⊃" will be automatically switched over to "⇄⊃").

5 Tune in the desired station.
See page 13.

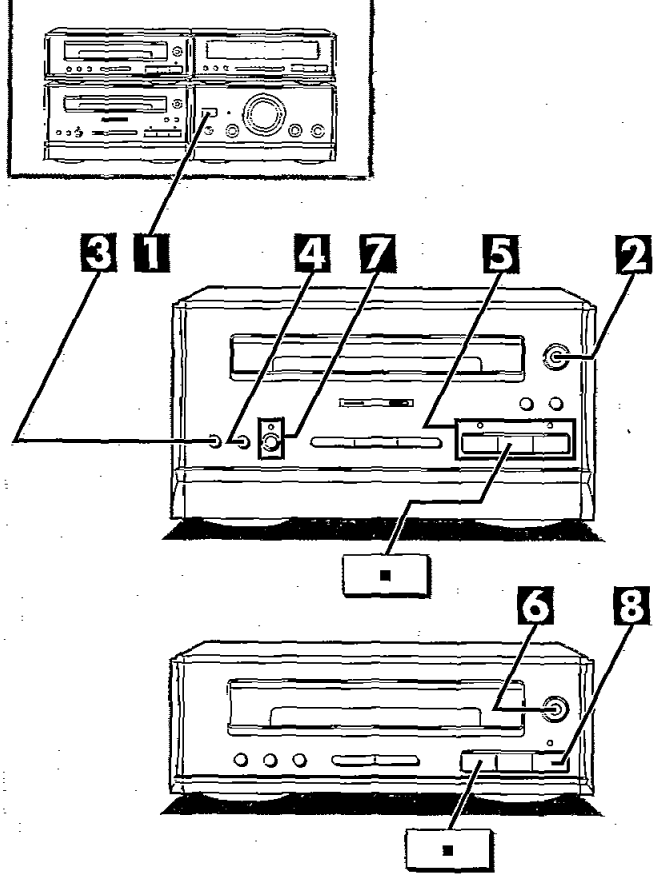
6 Press ● REC PAUSE to put the cassette deck into the recording standby mode.
REC PAUSE indicator will light.
The playback indicators above ◄ or ► will start flashing.

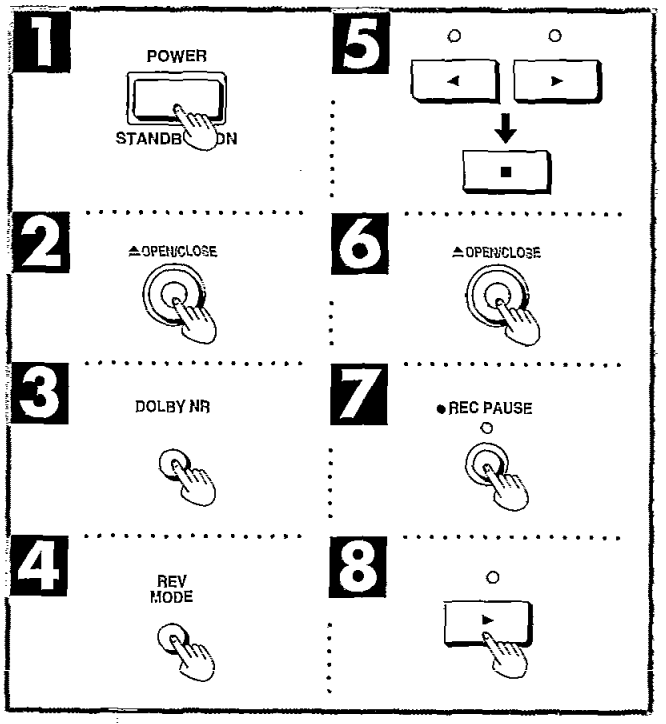
7 Press ◄ or ► to start recording.
►: To begin recording from the forward side.
◄: To begin recording from the reverse side.

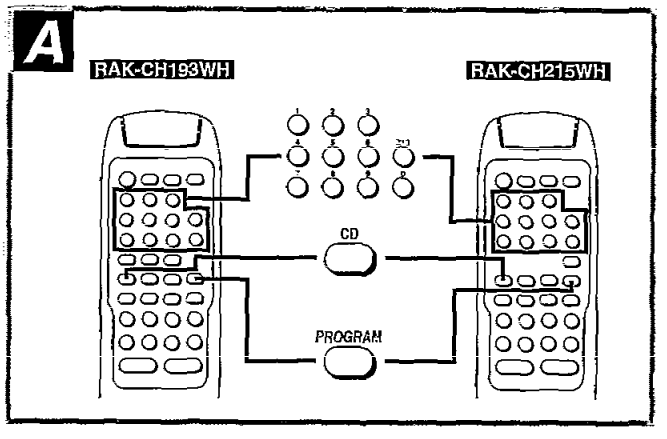
To stop recording:
Press ■.

To display the tape counter while recording:
Press DISPLAY.
The tape counter will be displayed for approximately 5 seconds. This is a useful way for knowing what point of the tape you're at.

To cut an unnecessary part while recording:
1. Press ● REC PAUSE.
   The cassette deck will go into the recording standby state.
2. To resume recording, press ◄ or ►, whichever playback indicator is flashing.







Recording from compact discs

For SC-HD51

Normal recording

1 Switch on the power.

2 Press ≜ OPEN/CLOSE on deck, and then insert the tape with the exposed part of the tape facing inward.

Insert the cassette tape until it touches the back of the compartment.

Press ≜ OPEN/CLOSE once again to close the holder.

3 To record in Dolby B NR:
Press DOLBY NR and check "DD" is displayed.

4 Press REV MODE to select the reverse mode.

⇄: One side will record, and then the tape will stop automatically at the tape end.

⇄⊃: Both sides will record (forward side→reverse side), and then the tape will stop automatically at the tape end.

C⇄⊃: Same as above (When you press ● REC PAUSE, "C⇄⊃" will be automatically switched over to "⇄⊃").

5 Set the tape travel direction.

To change the tape travel direction, first press ◄ or ► on the cassette deck, then press ■.

►: Recording from the forward side

◄: Recording from the reverse side

6 Insert a CD in the tray.

(For details, see page 16.)

7 Press ● REC PAUSE to put the cassette deck into the recording standby mode.

REC PAUSE indicator will light.

The playback indicator above ◄ or ► will start flashing.

8 Press ► on the CD player.

Recording will automatically start corresponding to the tape travel direction.

Approximately 4 seconds after the CD finishes playing, the cassette deck will automatically put recording on standby.

To stop recording:

•To add a 4 second silent interval before stopping

Press ■ on the CD player.

The cassette deck will go into the recording standby state.

•To stop recording without a silent interval

Press ■ on the cassette deck.

The CD player will not stop.

To record programmed tracks A

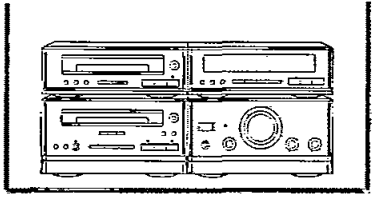
① Perform steps 1–6 above, and then press CD on the remote control.

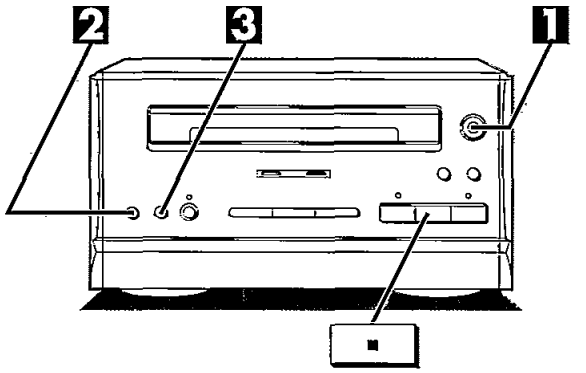
② Press PROGRAM on the remote control.

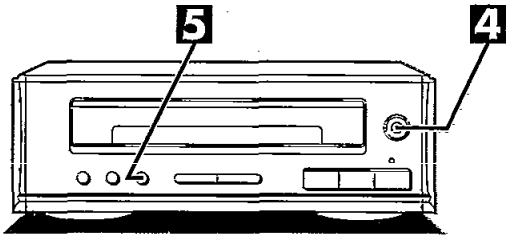
③ Select the track number from the remote control with the numeric button(s).

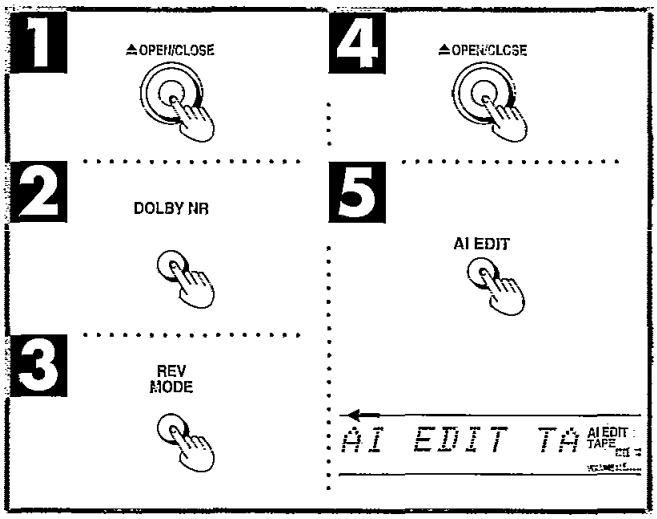
④ Repeat step ③ until you have programmed all tracks (max. 24 tracks).

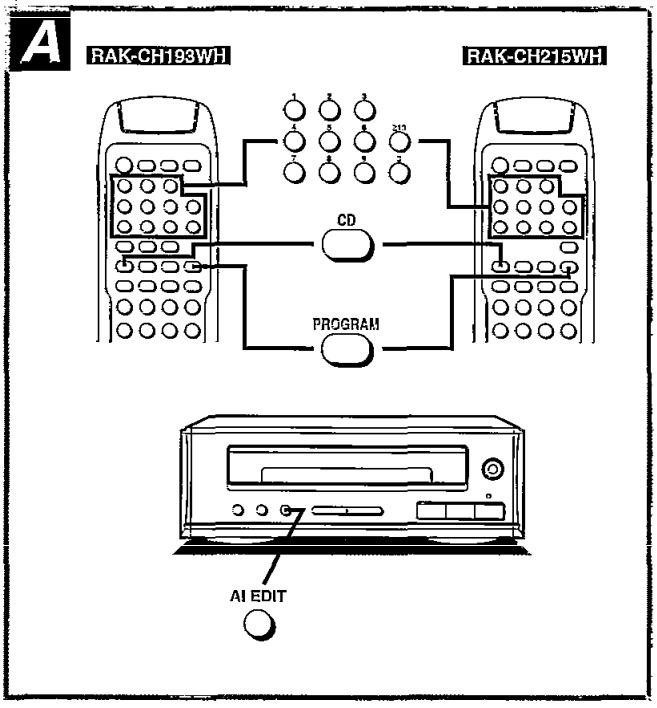
⑤ Perform steps 7 and 8 above.











One-touch editing

The tape deck automatically reads the length of the loaded tape, and then calculates which tracks go on which side of the tape so that no track is cut in the middle at the end of either side.
Recording will begin from the first track of the disc. It will continue through to the last track of the disc and then stop automatically.

Notes

- Use a tape of under 99 minutes.
- You cannot edit-record tracks numbering higher than 24.

One-touch editing automatically positions the leader tape for you, so you don't have to do it manually.

1 Press ≜ OPEN/CLOSE on deck, and then insert a tape.
Press ≜ OPEN/CLOSE once again to close the holder.

2 To record in Dolby B NR:
Press DOLBY NR and check "□□" is displayed.

3 Press REV MODE to select the reverse mode.
⇄: One side will record, and then the tape will stop automatically at the tape end.
⇄⊃: Both sides will record (forward side→reverse side), and then the tape will stop automatically at the tape end.
⊂⇄⊃: Same as above (When you press AI EDIT, "⊂⇄⊃" will be automatically switched over to "⇄⊃".).

4 Insert a CD in the tray.
(For details, see page 16.)

5 Press AI EDIT.
The deck will rewind the tape and recording will start. In the meantime, "AI EDIT TAPE" will scroll across the display from right to left. However, it will take a moment for recording to actually begin.

To stop one-touch editing:

Press ■ on the cassette deck.
The CD player will also stop.
"EDIT OUT" will scroll across the display from right to left.

When tracks are allotted to side B:

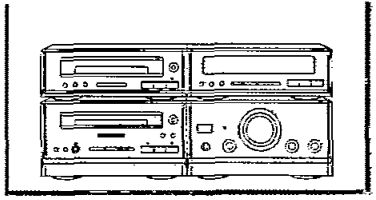
After recording the allotted tracks on side A, the cassette deck will continue recording on side A and will make a blank portion on side A in order to measure the proper length of the tape.

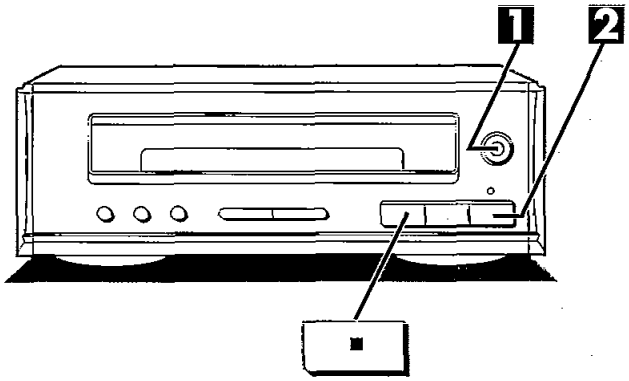
To edit-record programmed tracks A

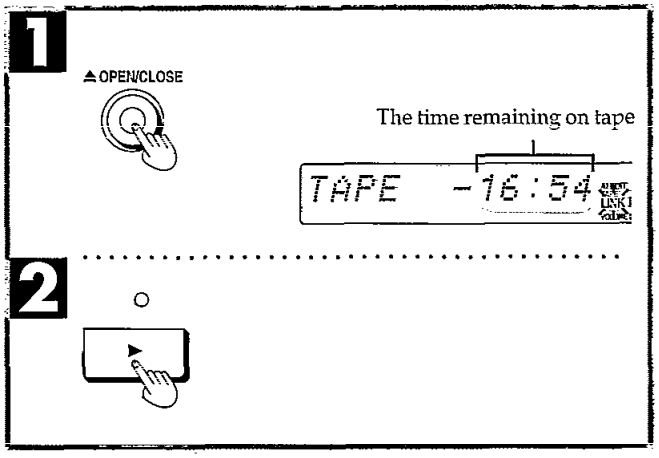
① Perform steps 1–4 above, and then press CD and PROGRAM on the remote control.
② Select the track number from the remote control with the numeric buttons.
③ Repeat step ② until you have programmed all tracks (max. 24 tracks).
④ Press AI EDIT. Recording will begin.

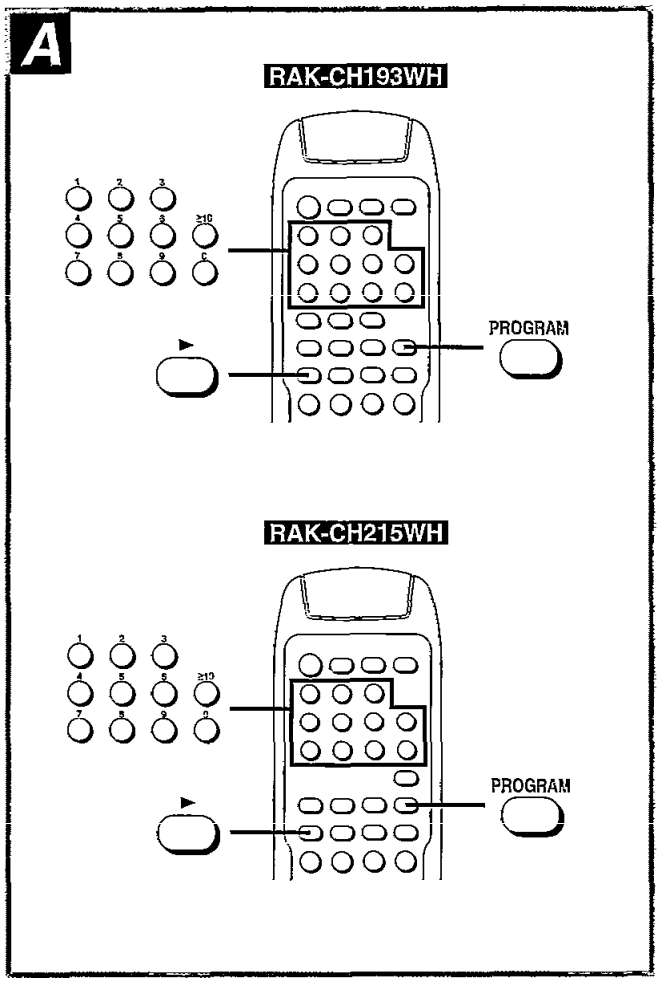
After edit-recording has finished:

The tape deck automatically puts recording on standby. In the meantime, if "LINK" flashes on the display, there is enough space on the tape that you can continue recording from another CD (see page 31). If you want to link the tracks, do not press ■ on the CD player.









Recording onto left over space on tapes (LINK)

Recording onto left over space on tapes (LINK):

After the edit-recording of a CD has finished, you can subsequently edit-record other CD(s) on the remaining blank portion of the tape.

For your reference:

It is better to use a tape slightly longer than the CD playing time when recording.

You can link up another CD when "LINK" flashes after editing a CD.

1 Press ▲ OPEN/CLOSE to replace the CD with another one.

Press ▲ OPEN/CLOSE once again to close the tray.
The display shows the time remaining on the tape for a few seconds.

2 Press ▶ on the CD player.

Linking will start.
As long as there is space on the tape to record, when recording has finished, the cassette deck will put linking on standby.

To continue linking tracks:

Repeat steps 1 and 2.

To cancel the LINK function:

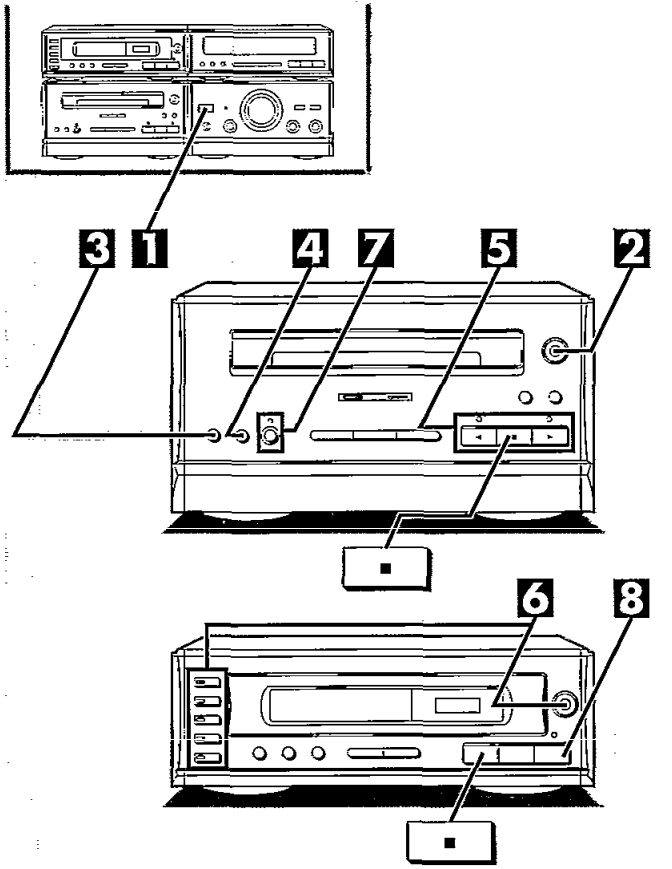
Press ■ on the CD player.
"EDIT OUT" will scroll across the display from right to left.

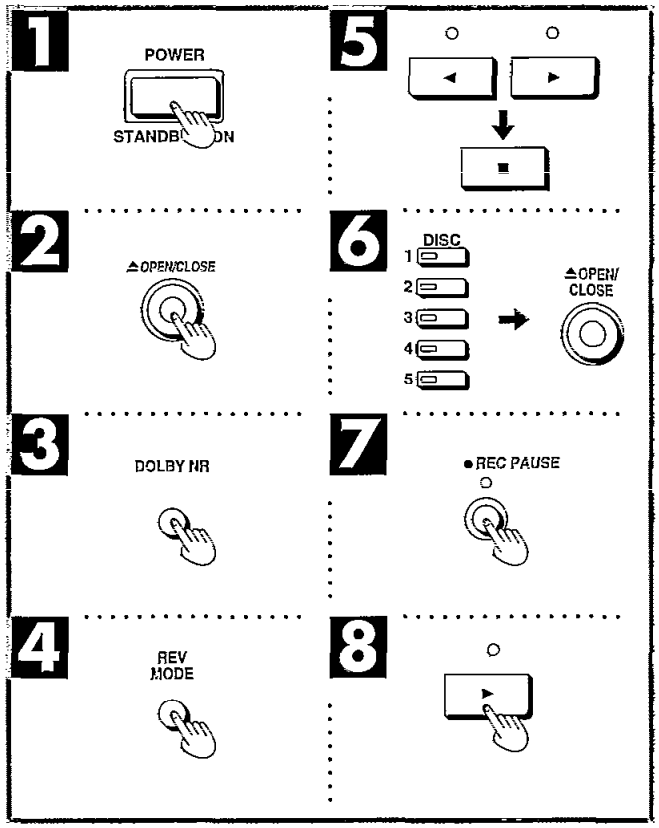
Linking programmed tracks A

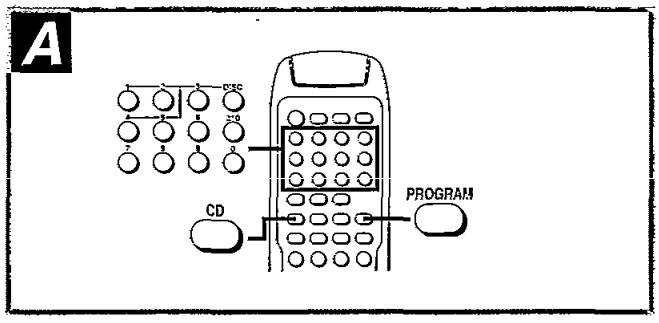
① Perform step 1 above, and then press PROGRAM on the remote control.
② Select the track number from the remote control with the numeric button(s).
③ Repeat step ② until you have programmed all tracks (max. 24 tracks).
④ Press ▶. Linking will begin.

Note

- When the display shows "0:00", you cannot record from another CD. Press ■ on the CD player.
- If the time remaining on the tape is shorter than the length of the tracks to be recorded, you cannot record the tracks. Replace the CD with the tracks shorter than the time remaining on the tape or press ■ on the CD player.







Recording from compact discs

For SC-HD81

Normal recording

1 Switch on the power.

2 Press ≜ OPEN/CLOSE on deck, and then insert the tape with the exposed part of the tape facing inward.

Insert the cassette tape until it touches the back of the compartment.

Press ≜ OPEN/CLOSE once again to close the holder.

3 To record in Dolby B NR.
Press DOLBY NR and check "□□" is displayed.

4 Press REV MODE to select the reverse mode.

⇄: One side will record, and then the tape will stop automatically at the tape end.
⇄⊃: Both sides will record (forward side→reverse side), and then the tape will stop automatically at the tape end.
⊂⇄⊃: Same as above (When you press ● REC PAUSE, "⊂⇄⊃" will be automatically switched over to "⇄⊃").

5 Set the tape travel direction.

To change the tape travel direction, first press ◄ or ► on the cassette deck, then ■.
►: Recording from the forward side
◄: Recording from the reverse side

6 Insert CDs in the trays.

(For details, see page 19.)

7 Press ● REC PAUSE to put the cassette deck into the recording standby mode.

REC PAUSE indicator lights.
The playback indicators above ◄ or ► will start flashing.

8 Press ► on the CD changer.

Recording will begin from the first track of the disc shown on the display.
To record from disc 1, press DISC 1.

Approximately 4 seconds after the CD finishes playing, the cassette deck will automatically put recording on standby.

To stop recording:

• To add a 4 second silent interval before stopping

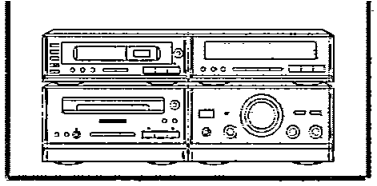
Press ■ on the CD changer.
The cassette deck will go into the recording standby state.

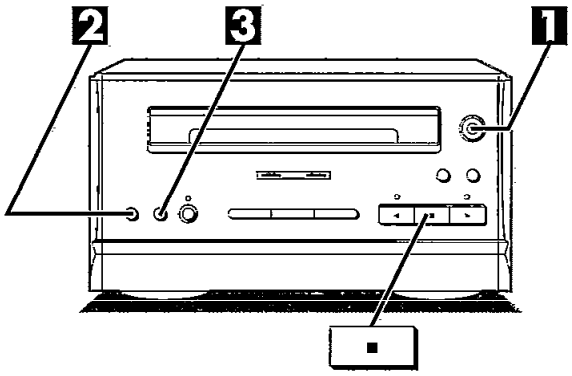
• To stop recording without a silent interval

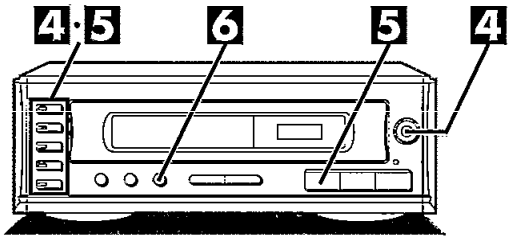
Press ■ on the cassette deck.
The CD changer does not stop.

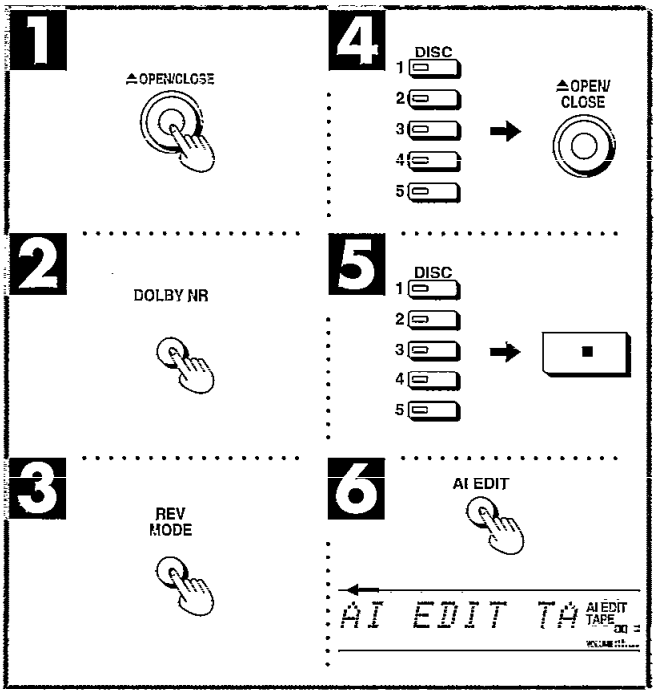
To record programmed tracks A

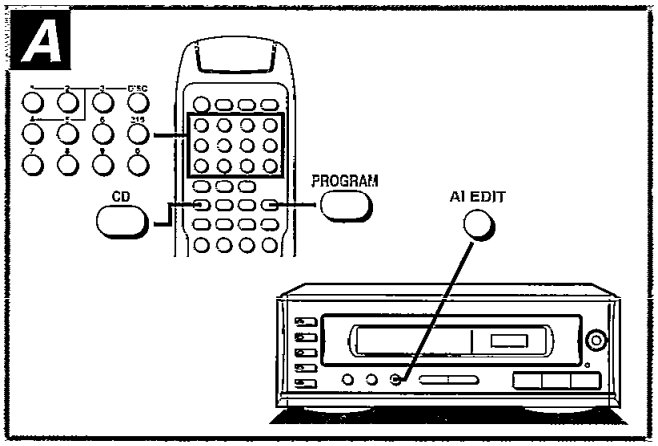
① Prform steps 1–6 above, and then press CD on the remote control.
② Press PROGRAM on the remote control.
③ Press DISC on the remote control.
④ Select the CD from the remote control with buttons 1–5.
⑤ Select the track number from the remote control with the numeric button(s).
⑥ Repeat steps ③ through ⑤ until programming all tracks (max. 24 tracks).
⑦ Perform above steps 7 and 8.











One-touch editing

The tape deck automatically reads the length of the loaded tape, and then calculates which tracks go on which side of the tape so that no track is cut in the middle at the end of either side.
Recording will begin from the first track of the disc shown on the display. It will continue through the last track on disc 5 and will then stop automatically.

Note

- One-touch editing is designed to record all the way through disc 5. If you want to record just one CD, set it in tray 5.
- Use a tape of under 99 minutes.
- You cannot edit-record tracks numbering higher than 24.
- In one-touch editing, you cannot record from programs that contain selections from two or more discs.

1 Press ≜ OPEN/CLOSE on deck, and then insert a tape.
Press ≜ OPEN/CLOSE once again to close the holder.

2 To record in Dolby B NR.
Press DOLBY NR and check "DD" is displayed.

3 Press REV MODE to select the reverse mode.
⇄: One side will record, and then the tape will stop automatically at the tape end.
⇄D: Both sides will record (forward side→reverse side), and then the tape will stop automatically at the tape end.
C⇄D: Same as above (When you press AI EDIT, "C⇄D" will be automatically switched over to "⇄D".).

4 Insert CDs in the trays. (For details, see page 19.)
Recording will begin from the first track of the disc shown on the display.

5 Specify the disc (DISC 1–5) you want to start recording from. Then, press ■ on the CD changer.

6 Press AI EDIT.
The deck will rewind the tape and recording will start. In the meantime, "AI EDIT TAPE" will scroll across the display from right to left. However, it will take a moment for recording to actually begin.

To stop one-touch editing:
Press ■ on the cassette deck.
The CD changer also stops.
"EDIT OUT" will scroll across the display from right to left.

When tracks are allotted to side B:
After recording the allotted tracks on side A, the cassette deck will continue recording on side A and will make a blank portion on side A in order to measure the proper length of the tape.

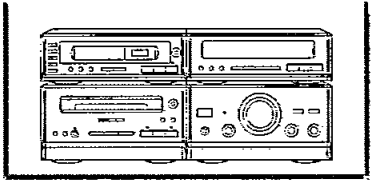
To edit-record programmed tracks A

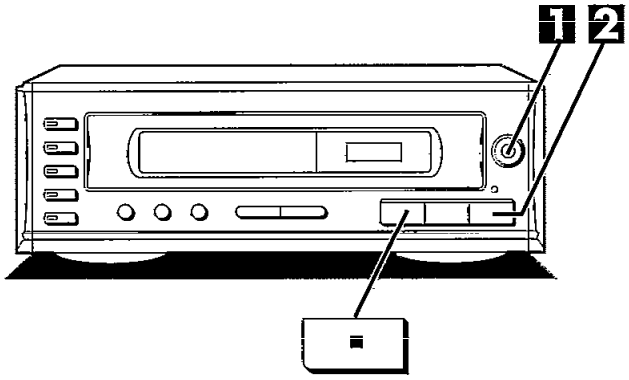
Note

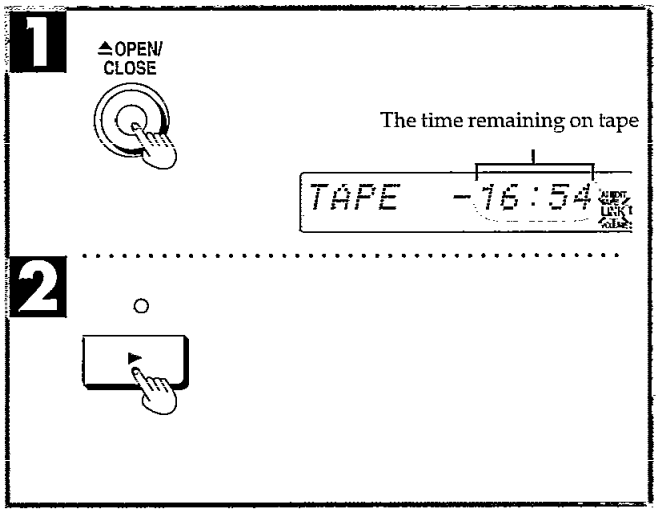
In one-touch editing, you cannot record from programs that contain selections from two or more discs.

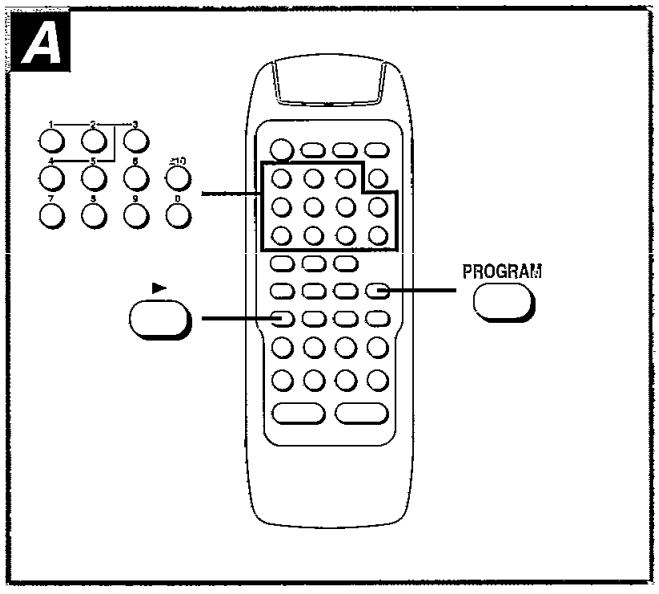
① Perform steps 1–4 above, and then press CD and PROGRAM on the remote control.
② Select the disc you want to record with DISC and the numeric buttons (1–5).
③ Select the track number from the remote control with the numeric buttons.
④ Repeat step ③ until programming all tracks (max. 24 tracks).
⑤ Press AI EDIT. Recording will begin.

After edit-recording has finished:
The tape deck automatically puts recording on standby. In the meantime, if "LINK" is flashed on the display, there is enough space on the tape that you can continue recording from another CD (see page 34). If you want to link the tracks, do not press ■ on the CD changer.









Recording onto left over space on tapes (LINK)

Recording onto left over space on tapes (LINK):

After the edit-recording of loaded CDs have finished, you can subsequently edit-record other CD(s) on the remaining blank portion of the tape.

For your reference:

It is better to use a tape slightly longer than the CD playing time when recording.
You can link up another CD when "LINK" flashes after editing a CD.

1 Press ≜ OPEN/CLOSE to replace the CD with another one.

The tray of the last disc (disc 5) will open. Load the new CD in there.
To open trays other than disc 5, hold down the ≜ OPEN/CLOSE a bit longer. The disc Nos. will be displayed in sequence on the display.
Release the button when the No. you want is displayed.

Note

- If you select a tray other than disc 5 and link it, linking will continue from the selected tray up to disc 5.
- If you were recording programmed tracks, the tray with the disc you were recording from will open.

2 Press ►.

Linking will start.

To continue linking tracks:

Repeat steps 1 and 2.
As long as there is space on the tape to record, when the recording finishing, the cassette deck will put linking on standby.

To cancel the LINK function:

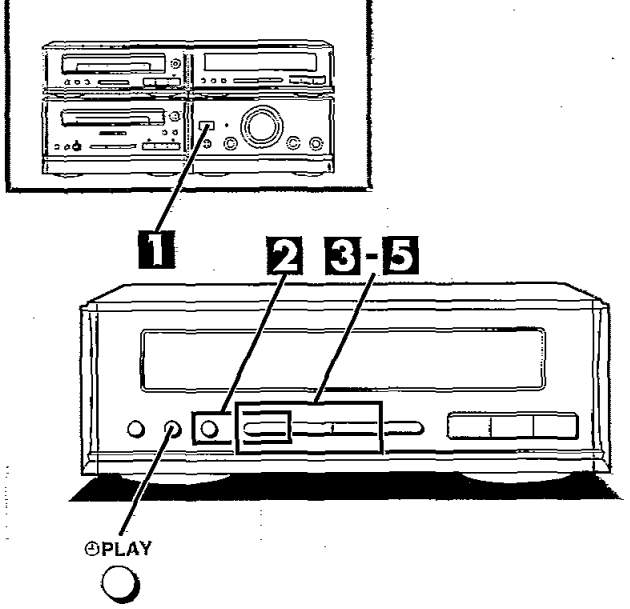
Press ■ on the CD changer.

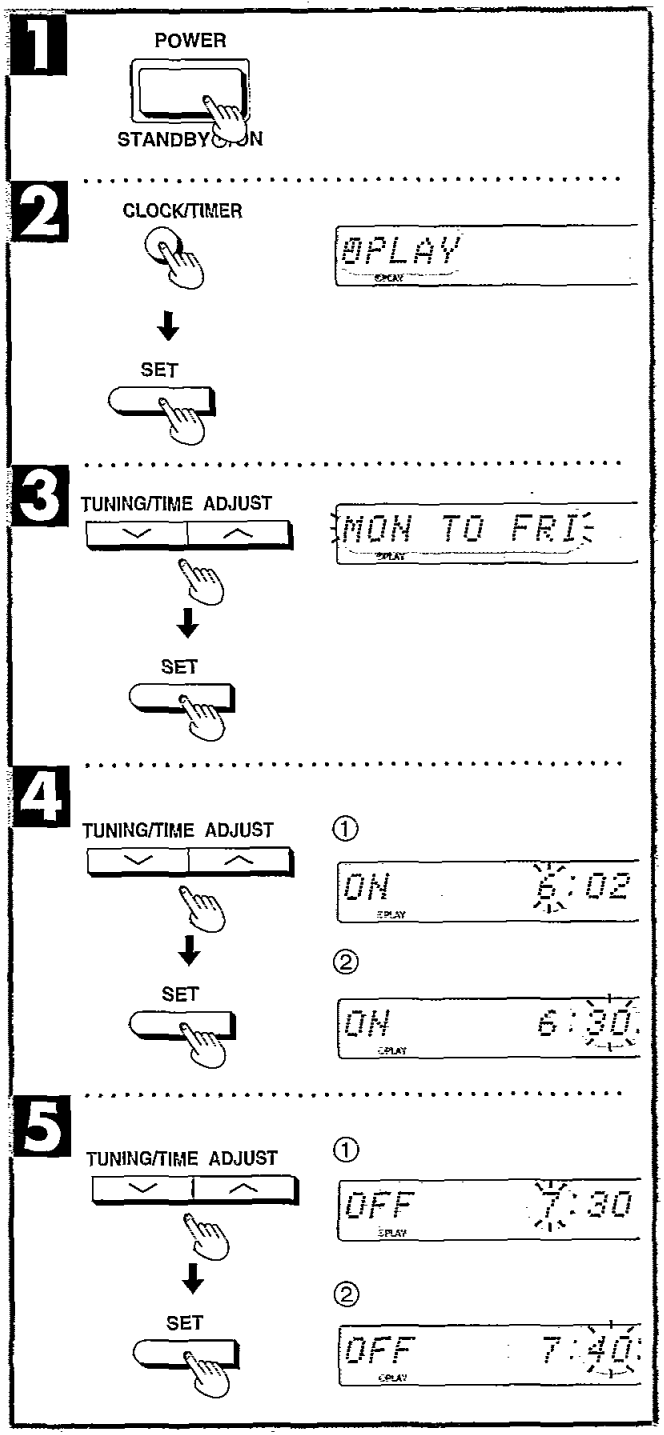
Linking programmed tracks A

① Perform step 1 above, and then press PROGRAM on the remote control.
② Select the track number from the remote control with the numeric button(s).
③ Repeat step ② until programming all tracks (max. 24 tracks).
④ Press ►. Linking will begin.

Note

- When recording from a programmed CD other than disc 5, if you press the ≜ OPEN/CLOSE button, the tray with the programmed CD will open/close.
- When the display shows "0:00", you cannot record from another CD. Press ■ on the CD changer.
- If the time remaining on the tape is shorter than the length of the tracks to be recorded, you cannot record the tracks. Replace the CD with the tracks shorter than the time remaining on the tape or press ■ on the CD changer.





Setting the play timer

Make sure that you have completed "Setting the time" on page 10.
Select this timer when you want to use the timer as an alarm clock. You can wake up with listening to music (CD, tuner, tape) at a desired volume level and time.
The following example in the figure shows how to set the play timer for; playing a CD at −40 dB everyday from Monday through Friday 6:30 to 7:40.

1 Switch on the power.

2 Press CLOCK/TIMER three times to show "⏲ PLAY" on the display, and then press SET within 25 seconds.

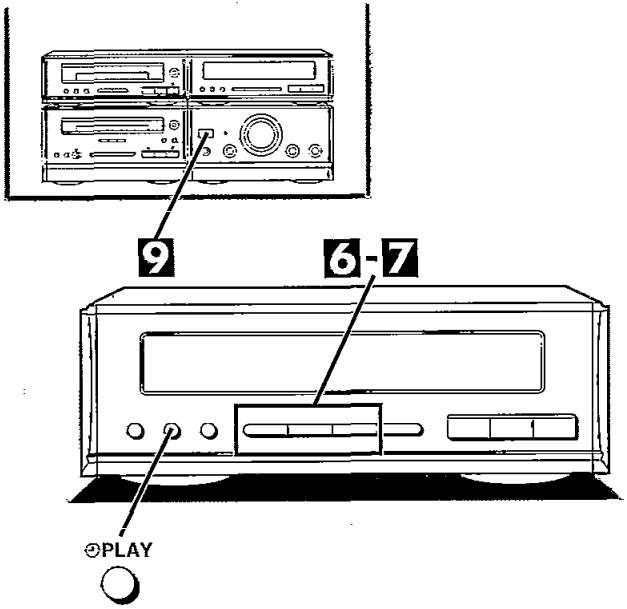
3 Press ∨ or ∧ to select the day, and press SET.

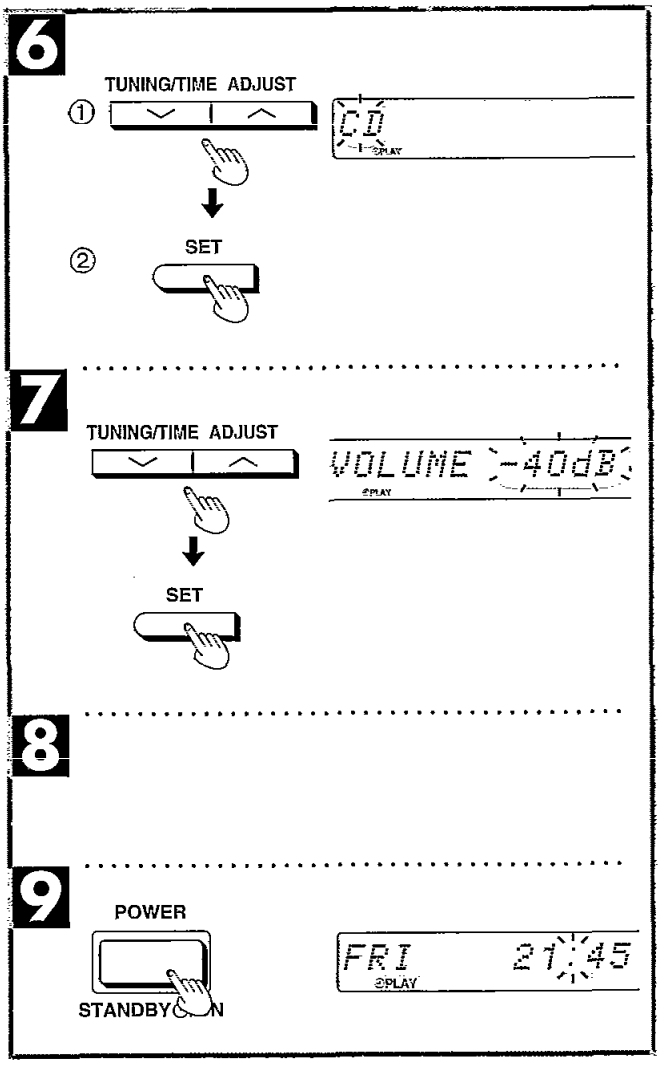
About the variation of the day setting:
One day from Sunday to Saturday:
SUN...SAT
Everyday from Sunday to Saturday:
SUN TO SAT
Everyday from Monday to Saturday:
MON TO SAT
Everyday from Monday to Friday:
MON TO FRI
Saturday and Sunday only:
SAT, SUN

4 ("ON" time setting)
① Press ∨ or ∧ to select the hour, and press SET.
② Press ∨ or ∧ to select the minutes, and press SET.

5 ("OFF" time setting)
① Press ∨ or ∧ to select the hour, and press SET.
② Press ∨ or ∧ to select the minutes, and press SET.

(Continued on next page)





Setting the play timer

6 **① Press ∨ or ∧ to select the desired source.**

The display will change as follows.

CD⇄TAPE⇄TUNER

② Press SET.

When you select "TUNER", select a desired preset channel using ∨ or ∧, and then press SET.

7 **Press ∨ or ∧ to adjust the volume level for the timer play, and press SET.**

The display will show the day, ON time, OFF time, the source you select, and the volume level alternately, and then resumes the previous display.

8 **Prepare for the play.**

When you play a CD: Load a CD.
When you play a tape: Load a tape.

9 **Press POWER to switch the power to standby mode.**

Please confirm "⏲ PLAY".
The timer play will start at the preset time with volume increasing gradually up to the volume level you preset.

To cancel the timer:

Press ⏲ PLAY to go out "⏲ PLAY".
The play timer function will be canceled, but the setting stays in the memory.

To confirm the play timer:

You can operate this even if the system is in the standby mode.
Press CLOCK/TIMER to show "⏲ PLAY".
The display will show the day, ON time, OFF time, the source you select, and the volume level alternately.

To change the play timer setting:

Follow the procedure from the first step.

Using the timer at the same time setting continuously:

You can operate this even if the system is in the standby mode.
The play timer setting will stay in the memory.

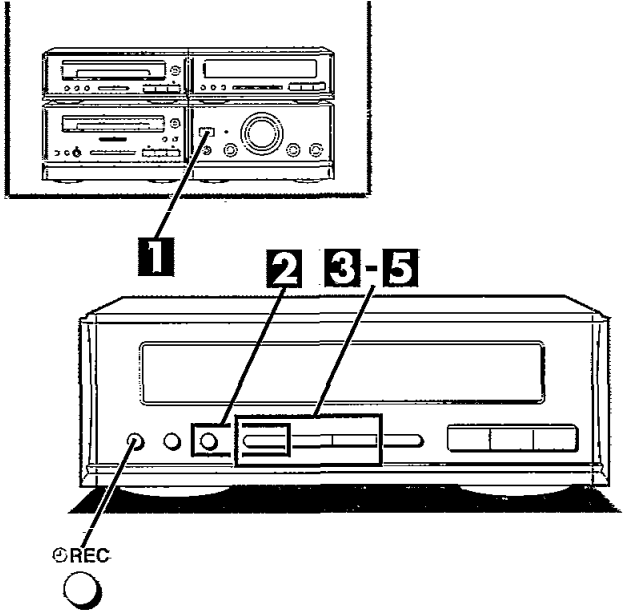
1. Press ⏲ PLAY to show "⏲ PLAY".
2. Press POWER to switch the power to standby mode.

To enjoy the desired source after the timer setting is completed:

1. Start playing the desired source.
   Even if you change the volume level or music source, the timer play will start with the preset condition.
2. Press POWER to standby mode after enjoying the play.

Note

- If the power is on, the timer will not function. The system must be in the standby mode.
- You cannot make the ON time and OFF time same setting.
- The play timer will function until you cancel the play timer mode. When the display shows "⏲ PLAY", the play timer will be activated.



Setting the record timer

Make sure that you have completed "Setting the time" on page 10.
Use this timer to record radio programs when you are out. The system will record the program you set at the time you set.
The following example in the figure shows how to set the record timer for; recording preset channel no. 3 on Saturday from 18:30 to 20:00.

1 **Switch on the power.**

2 **Press CLOCK/TIMER twice to show "⏲ REC" on the display, and then press SET within 25 seconds.**

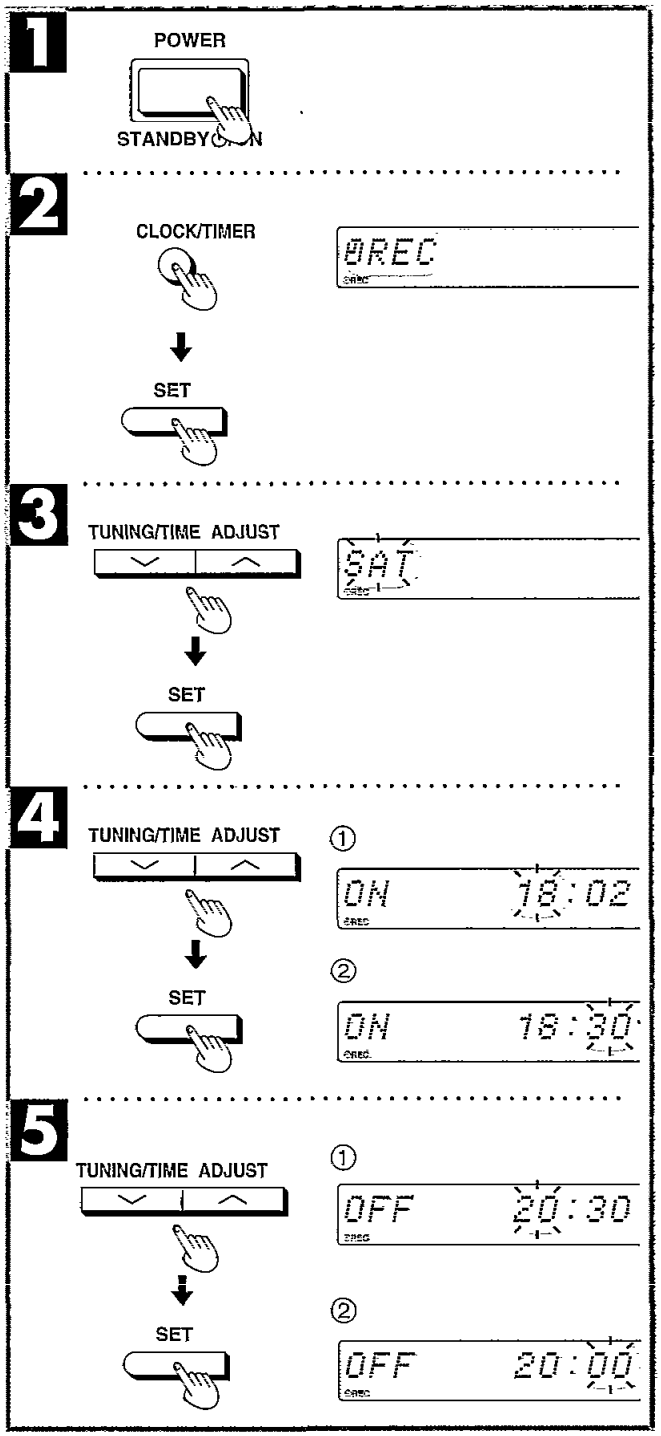
3 **Press ∨ or ∧ to select the day, and press SET.**

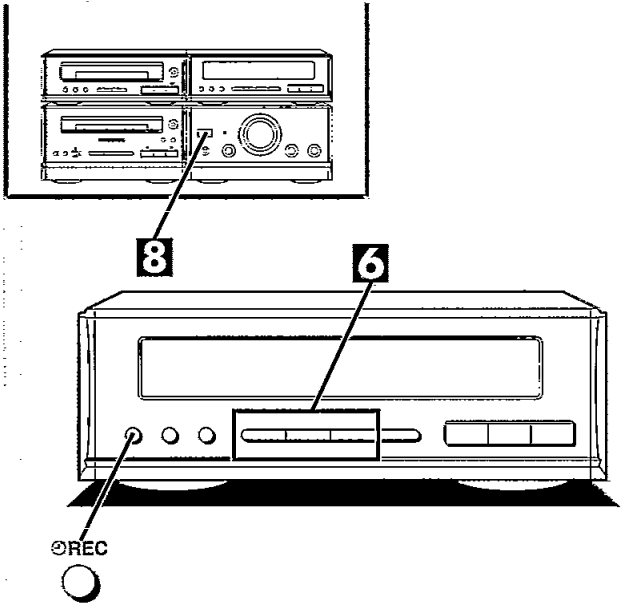
About the variation of the day setting:
One day from Sunday to Saturday:
SUN...SAT
Everyday from Sunday to Saturday:
SUN TO SAT

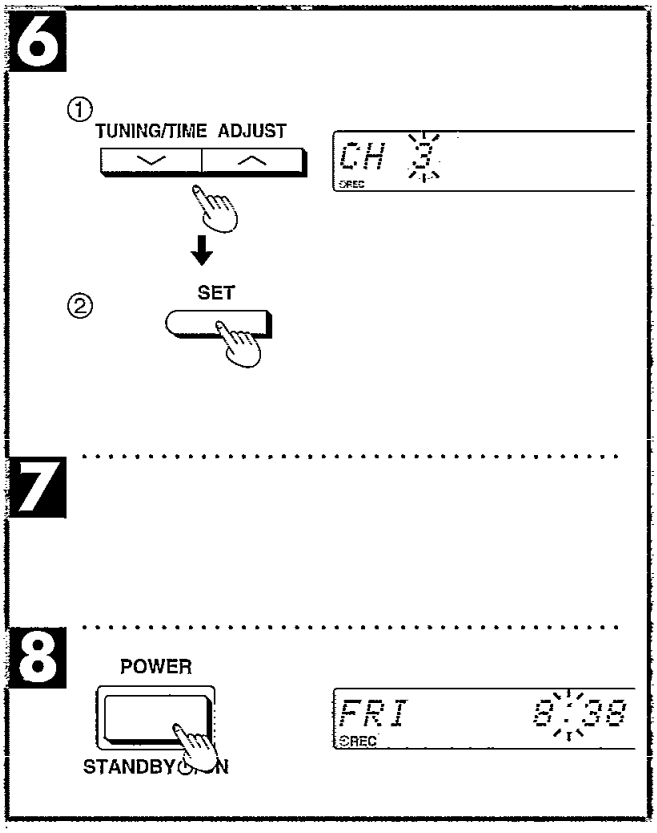
4 **("ON" time setting)**
① Press ∨ or ∧ to select the hour, and press SET.
② Press ∨ or ∧ to select the minutes, and press SET.

5 **("OFF" time setting)**
① Press ∨ or ∧ to select the hour, and press SET.
② Press ∨ or ∧ to select the minutes, and press SET.

(Continued on next page)







Setting the record timer

6 **① Press ∨ or ∧ to select the desired preset channel.**

The display will change as follows.

CH1⇄CH2...CH38⇄CH39

② Press SET.

The display will show the day, ON time, OFF time, the broadcast station you select alternately, and then resumes the previous display.

7 **Prepare for recording.**

1. Insert a tape into deck.
2. Select the Dolby NR mode.
3. Select the reverse mode.
4. Select the tape travel direction.

8 **Press POWER to switch the power to standby mode.**

Please confirm "⏲ REC".

The tuner recording will start 30 seconds before the setting time.

The sound will be automatically muted during timer recording.

To cancel the timer:

Press ⏲ REC to go out "⏲ REC".

The record timer function will be canceled, but the setting stays in the memory.

To confirm the record timer:

You can operate this even if the system is in the standby mode.

Press CLOCK/TIMER to show "⏲ REC".

The display will show the day, ON time, OFF time, the broadcast station you select alternately.

To change the record timer setting:

Follow the procedure from the first step.

Using the timer at the same time setting continuously:

You can operate this even if the system is in the standby mode.

The record timer setting will stay in the memory.

1. Press ⏲ REC to show "⏲ REC".
2. Press POWER to switch the power to standby mode.

To enjoy the desired source after the timer setting is completed:

1. Start playing the desired source.
   Even if you change the music source, the timer recording will start with the preset condition.
2. Press POWER to standby mode after enjoying the play.

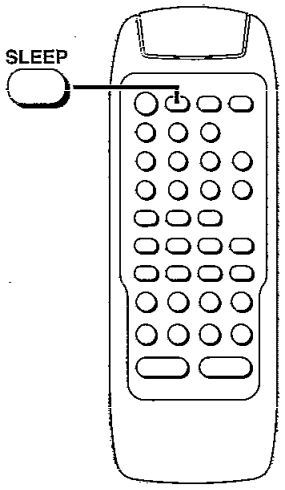
Note

- If the power is on, the timer will not function.
- This system retains the ON/OFF time settings until you make a new setting. If you make a new ON time setting, the previous OFF time setting will change to the same setting.
- You cannot make the ON time and OFF time same setting.
- Once the record timer operation finishes, it clears the record timer mode (except for everyday mode "SUN TO SAT"). When the display shows "⏲ REC", the record timer will be activated.
- Be careful when changing tapes if the record timer is ON, so as not to record over favorite parts. Be sure to use only blank tapes or ones you don't mind erasing.

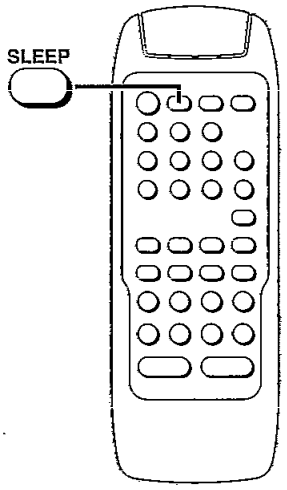
For your reference:

When you want to record a same program over several weeks (except when you select everyday mode "SUN TO SAT"), press ⏲ REC to show "⏲ REC" after the timer recording has finished.

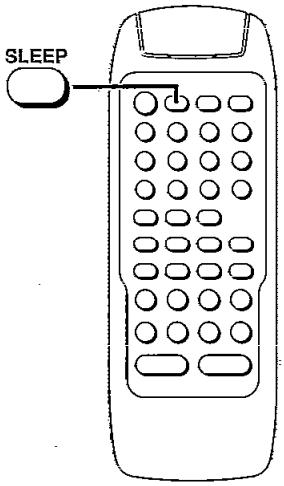
RAK-CH193WH

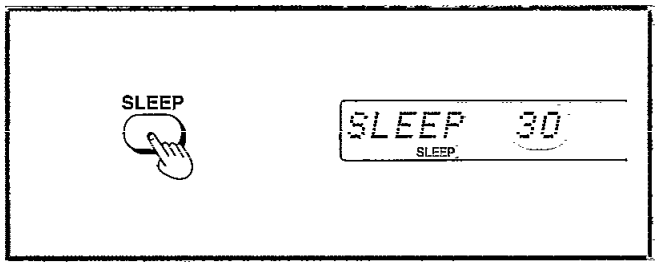


RAK-CH215WH



RAK-CH214WH





To use the sleep timer

A

by remote control only

The system will go into power standby mode at the set time (max. 2 hours, set every half hour), so you can go to sleep listening to music. The following example in the figure shows how to set the system to standby mode after 30 minutes.

While enjoying the desired source:
Press SLEEP.

"SLEEP" lights up.
Each time you press the button, the display will change as follows:

SLEEP 30→SLEEP 60→SLEEP 90
↑ ↓
SLEEP OFF←——————SLEEP 120

To cancel the sleep timer:

Press SLEEP to select "SLEEP OFF".
"SLEEP" goes out.

To confirm the remaining of the sleep timer:

(While sleep timer is functioning:)
Press SLEEP.
The remaining time will be displayed for 5 seconds.

To change the timer setting while sleep timer is functioning:

1. Press SLEEP.
   The remaining time will be displayed for 5 seconds.
2. Press SLEEP again to select the desired SLEEP timer.

To use each timer mode in conjunction

To go to sleep listening to an FM broadcast and wake up the next morning listening to a CD

1. Make a play timer setting for a CD.
2. Tune in the desired band and station, and adjust the volume level.
3. Make a sleep timer setting.

To make a timer recording from a radio broadcast while sleeping, and wake up the next morning listening to a tape

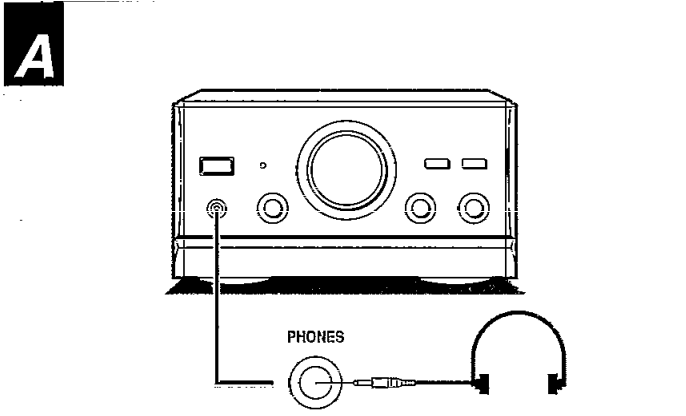
1. Make a record timer setting.
2. Make a play timer setting for tape, and switch the power to standby mode.
   Be sure to set the record timer to be off before the play timer will begin.

To go to sleep listening to a CD, and then to make a timer recording from a radio broadcast

1. Make a record timer setting.
2. Play a CD, and adjust the volume level.
3. Make a sleep timer setting.
   Be sure to set the system into standby mode before the timer recording will begin.

Timer sequence priority:

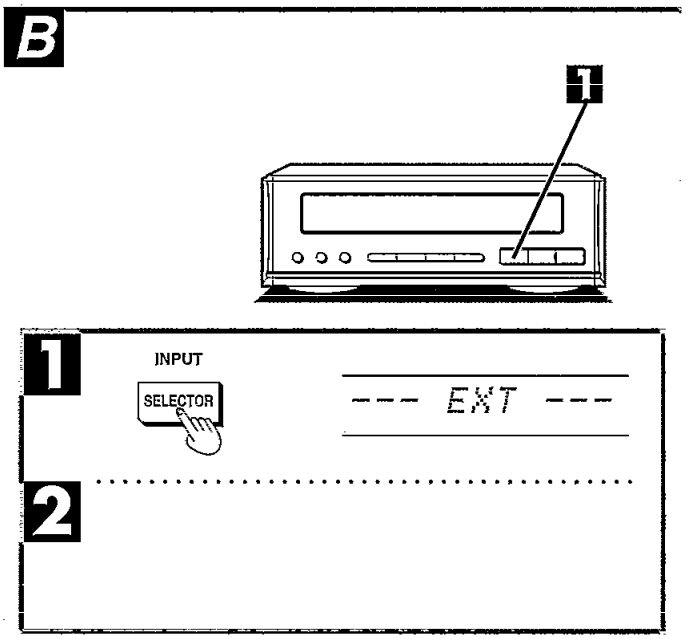
Sleep timer, record timer, play timer is the timer operation of priority in order. Be sure not to make each timer setting overlap.



To use headphones

A

- Before connecting, reduce the volume level.
- Avoid listening for prolonged periods of time to prevent hearing damage.
- Plug type: 3.5 mm stereo



Listening to an external source

B

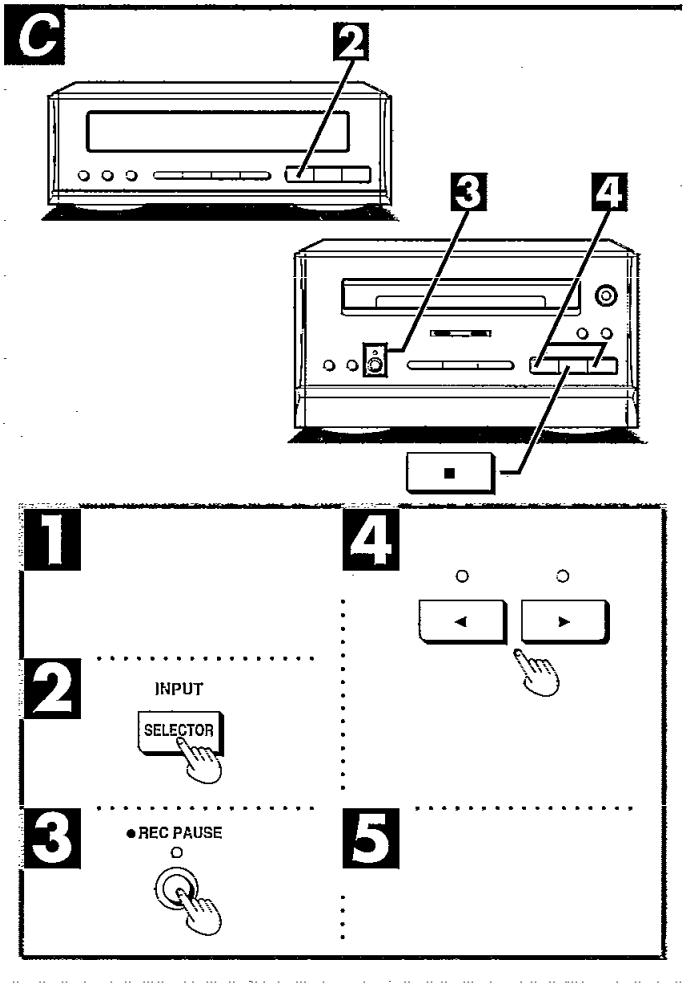
1 Press INPUT SELECTOR to select the external source (EXT).

Each time you press this button, sound sources will be switched as follows.

TUNER → CD → TAPE → EXT

2 Operate the unit which is connected to the system.

See the instruction manual of the unit concerned for the operation.



Recording from an external source

C

1 Follow steps 1–4 on page 28.

2 Press INPUT SELECTOR to select the external source (EXT).

3 Press ● REC PAUSE to put the cassette deck into the recording standby mode.

4 Press ◄ or ► to start recording.

5 Start playing the source to be recorded.

See the instruction manual of the unit concerned for the operation.

To stop recording:

Press ■ on the cassette deck.

To briefly interrupt recording:

Press ● REC PAUSE.
The cassette deck will go into the recording standby mode.
To resume recording:
Press ◄ or ► corresponding to the direction in which recording is taking place.

Recording on an external cassette deck

For audio recordings, a cassette deck has to be connected to the "EXT" terminal.

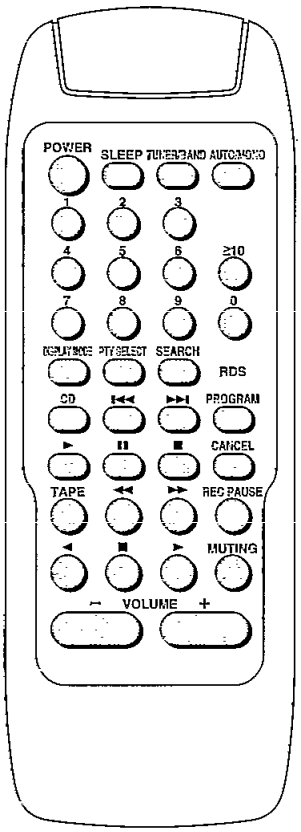
To record onto an external cassette deck:

1. Press INPUT SELECTOR until selecting the source you want to record from (must be other than "EXT").
2. Start recording on the cassette deck. For details, see the instruction manual that came with the cassette deck.

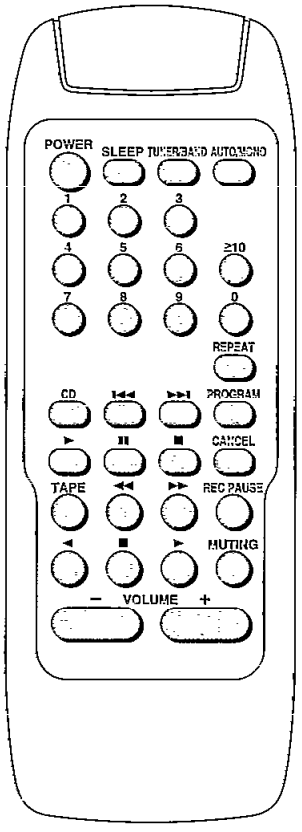
Remote control buttons and functions For SC-HD51

Reference pages are given as black circled numbers.

RAK-CH193WH



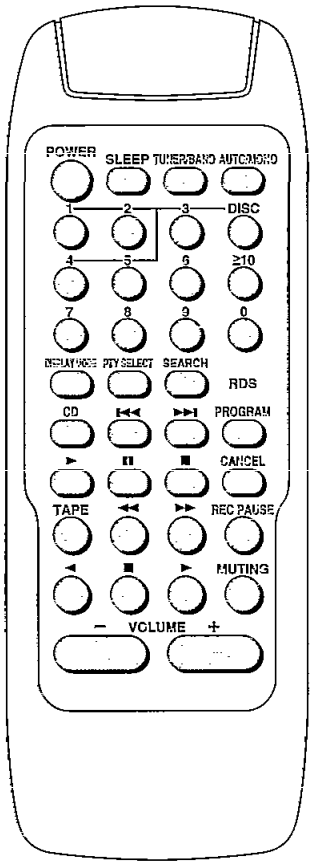
RAK-CH215WH



Button	Radio	CD	Tape	Other component
POWER	Turns the system ON/OFF ⑩			
SLEEP	For setting sleep timer ㊴			—
TUNER/BAND	Band switching ⑪	—	—	—
AUTO/MONO	Stereo/Mono switching (FM) ⑬	—	—	—
RAK-CH193WH only DISPLAY MODE, PTY SELECT, SEARCH	For RDS broadcast enjoyment ⑭, ⑮	—	—	—
0–9	For station selection (In preset mode) ⑬	Track selection ⑰, ⑱	—	—
RAK-CH215WH only REPEAT	—	Repeats the play ⑰	—	—
⏮ ⏭	—	Forward/Backward skip ⑯	—	—
PROGRAM	—	Engages program input ⑱	—	—
▶	—	Playback (▶) ⑯	—	—
❚❚	—	Pause (❚❚) ⑯	—	—
■	—	Stop (■) ⑯	—	—
CANCEL	—	Cancels program contents ⑱	—	—
◀◀ ▶▶	—	—	•Fast-forward/ Rewind (While stopped) ㉔ •Skips to track beginning (During playback) ㉕	—
REC PAUSE	—	—	Puts recording on pause ㉘, ㉙	—
◀ ▶	—	—	•Playback ㉓ •Starts recording from recording standby mode. ㉘	—
■	—	—	Stop (■) ㉓	—
TUNER/BAND, CD, TAPE	Input source selection			
MUTING	Mutes volume temporarily ㉖			
VOLUME − +	For setting volume ⑬, ⑲, ㉓			

Remote control buttons and functions For SC-HD81

Reference pages are given as black circled numbers.



Button	Radio	CD	Tape	Other component
POWER	Turns the system ON/OFF ⑩			
SLEEP	For setting sleep timer ㊴			—
TUNER/BAND	Band switching ⑪	—	—	—
AUTO/MONO	Stereo/Mono switching (FM) ⑬	—	—	—
DISPLAY/CODE PTY SELECT SEARCH	For RDS broadcast enjoyment ⑭, ⑮	—	—	—
DISC	—	CD select mode ㉑, ㉒	—	—
1 2 3 4 5 6 ≥10 7 8 9 0	For station selection (In preset mode) ⑬	•CD selection (1–5) •Track selection ㉑, ㉒	—	—
⏮ ⏭	—	Forward/Backward skip ⑳	—	—
PROGRAM	—	Engages program input ㉒	—	—
▶	—	Playback (▶) ⑳	—	—
❚❚	—	Pause (❚❚) ⑳	—	—
■	—	Stop (■) ⑳	—	—
CANCEL	—	Cancels program contents ㉒	—	—
◀◀ ▶▶	—	—	•Fast-forward/Rewind (While stopped) ㉔ •Skip to track beginning (During playback) ㉕	—
REC PAUSE	—	—	Puts recording on pause ㉘, ㉜	—
◀ ▶	—	—	•Playback ㉓ •Starts recording from recording standby mode. ㉘	—
■	—	—	Stop (■) ㉓	—
TUNER/BAND CD TAPE	Input source selection			
MUTING	Mutes volume temporarily ㉙			
VOLUME − +	For setting volume ⑬, ⑳, ㉓			

Reference

Placement

Avoid placing the unit in areas of:
- direct sunlight
- high temperature
- high humidity
- excessive vibration
- uneven surfaces (Place the unit on a flat level surface.)

Such conditions might damage the cabinet and/or other component parts and thereby shorten the unit's service life.
To protect the unit against sound distortion and acoustical effects, please place the unit at least 15 cm away from wall surfaces etc.

Stacking

Never place heavy items on top of the unit or the AC power cord.

Voltage

- It is very dangerous to use an AC power source of high voltage such as for an air conditioner.
  A fire might be caused by such a connection.
- A DC power source can not be used.
  Be sure to check the power source carefully, especially if on a ship or other place where DC is used.

Power cord protection

- Avoid cuts, scratches or poor connection of the AC power cord, as this may result in fire or electric shock.
  Excessive bending, pulling or slicing of the cord should also be avoided.
- Do not pull on the cord when you are disconnecting the power, as this could cause an electric shock. Grasp the plug firmly when you disconnect the power supply.
- Never touch the plug with wet hands or a serious electric shock could result.

Foreign materials

- Ensure that no foreign objects, such as needles, coins, screwdrivers etc., accidentally fall into the unit.
  Otherwise, a serious electric shock or malfunction could occur.
- Be extremely careful about spilling water or liquid on/into the unit, as a fire or electric shock could occur.
  (Disconnect the power plug and contact your dealer immediately if this occurs.)
- Avoid spraying insecticides onto the unit as they contain flammable gases which can be ignited.
- Insecticides, alcohol, paint thinner and similar chemicals should never be used to clean the unit as they can cause flaking or cloudiness to the cabinet finish.

Service

- Never attempt to repair, disassemble or reconstruct the unit if there seems to be a problem.
  A serious electric shock could result if you ignore this precautionary measure.
- If a problem occurs during operation (the sound is interrupted, indicators fail to light up, smoke is detected, etc.) contact your dealer or Authorized Service Center immediately.
- Disconnect the power supply if the unit will not be used for a long time. Otherwise the operation life could be shortened.

Concerning CDs

With this system, you can only play CDs having this mark.
However, do not use irregular shape CDs (heart-shape, octagonal, etc.). CDs of the sort can damage the unit. A

COMPACT disc DIGITAL AUDIO

Handling precautions

Be sure to handle CDs according to the precautions shown on the left (B–D). Failure to do so may damage the CD or the unit.

- If you are taking the CD from a cold to a warm environment, moisture may form on the CD. Wipe this off with a soft, dry, lint-free cloth before using the CD.
- Do not write on the label side with a ball-point pen or other writing instrument.
- Do not use record cleaning sprays, benzine, thinner, static electricity prevention liquids or any other solvent.
- Do not attach labels or stickers to CDs. (Do not use CDs with exposed adhesive from tape or left over peeled off stickers.)
- Do not use scratch-proof protectors or covers other than those specified for use with this system.

Storage precautions

Be sure to store CDs in their cases to protect them from dust, scratches, and warping.

Do not place or store CDs in the following places

- Locations exposed to direct sunlight
- Humid or dusty locations
- Locations directly exposed to a heat vent or heating appliance
- In the glove compartment or on the rear deck of an automobile

Concerning cassette tapes

Selection of cassette tapes

Tapes can get caught on the capstans. Use caution with the following types of tapes.

Cassette tapes exceeding 100 minutes
Tapes are made of a thin film material. Do not repeatedly advance and stop the tape, fast-forward it or rewind it.

Endless-tapes
For this unit, it is recommended to use tapes which are appropriate to the auto reverse mechanism.

Always read the instructions provided with your tapes.

Tape slack E

Tape slack may cause the tape to break.

Erasure prevention F

Use a screwdriver or similar object to break out the tab.

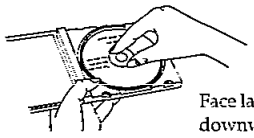
Storage precautions

Do not place or store tapes in the following places;

- In high temperature (35°C or higher) or high humidity (80% or higher) areas
- In a strong magnetic field (near a speaker, on top of a TV, etc.) This can erase a recording.
- Locations exposed to direct sunlight

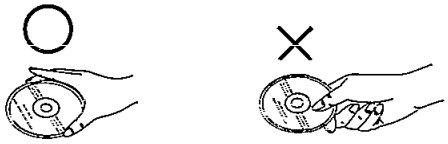
A

B How to return CDs to their case



Face label upwards and press downward from above.

C How to hold CDs

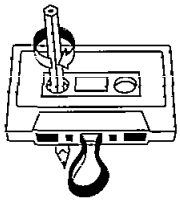


Do not touch the recorded surface.

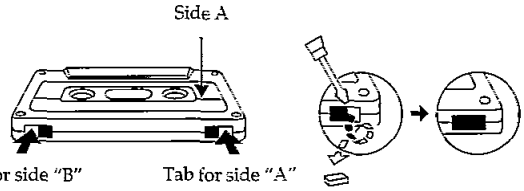
D How to clean CDs

Wipe from inside outward.

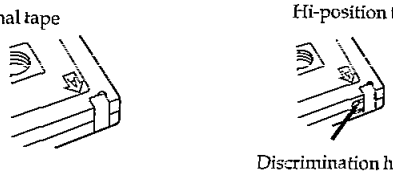
E How to take up tape slack



F



To re-record



Technical specifications (DIN 45 500)

TUNER

■ Pre-amplifier section

Input sensitivity/impedance
EXT 250 mV/15 kΩ
Output level
EXT 250 mV/1.5 kΩ
Frequency response
EXT 50 Hz–25 kHz
S/N
EXT DIN 82 dB (83 dB, IHF)

■ FM tuner section

Frequency range 87.50–108.00 MHz (0.05 MHz steps)
Sensitivity 1.8 μV (IHF usable)
S/N 26 dB 1.5 μV
S/N
MONO 70 dB (75 dB, IHF)
Stereo separation
1 kHz 35 dB
Antenna terminal(s) 75Ω (unbalanced)

■ AM tuner section

Frequency range
522–1611 kHz (9 kHz steps)
530–1620 kHz (10 kHz steps)
Sensitivity
S/N 20 dB 500 μV/m

■ Timer section

Clock Quartz-lock type
Function 24-hour programmable; Play timer (1 time), Rec timer (1 time), Sleep (120 min, 30 min intervals)
Setting 1 minute–23 hours 59 minutes (1 min intervals)

■ General

Dimensions (W×H×D) 196×67×235 mm
Weight 1.2 kg

AMPLIFIER SC-HD81

■ Amplifier section

Power output
DIN 1 kHz, THD 1%, both channels driven 2×45 W (6Ω)
RMS 1 kHz, THD 10%, both channels driven 2×60 W (6Ω)
Total harmonic distortion
Rated power at 1 kHz 1% (6Ω)
Half power at 1 kHz 0.09% (6Ω)
Load impedance 6Ω
S/N (rated power) 90 dB

■ General

Power supply
For United Kingdom
230–240 V, AC 50 Hz
For Continental Europe and others
230 V, AC 50 Hz
Power consumption 100 W
Dimensions (W×H×D) 196×103×255 mm
Weight 4.1 kg

AMPLIFIER SC-HD51

■ Amplifier section

Power output
DIN 1 kHz, THD 1%, both channels driven 2×23 W (6Ω)
RMS 1 kHz, THD 10%, both channels driven 2×30 W (6Ω)
Total harmonic distortion
Rated power at 1 kHz 1% (6Ω)
Half power at 1 kHz 0.09% (6Ω)
Load impedance 6Ω
S/N (rated power) 90 dB

■ General

Power supply
For United Kingdom
230–240 V, AC 50 Hz
For Continental Europe
230 V, AC 50 Hz
Power consumption 90 W
Dimensions (W×H×D) 196×103×255 mm
Weight 3.5 kg

CD CHANGER SC-HD81

■ Audio

DA converter 1 bit 2 DAC MASH

■ Pickup

Wavelength 780 nm

■ General

Dimensions (W×H×D) 196×67×229 mm
Weight 1.7 kg

CD PLAYER SC-HD51

■ Audio

DA converter 1 bit 2 DAC MASH

■ Pickup

Wavelength 780 nm

■ General

Dimensions (W×H×D) 196×67×228 mm
Weight 1.3 kg

CASSETTE DECK

Deck system Stereo cassette deck
Track system 4 track, 2 channel
Recording system AC bias
Bias frequency 100 kHz
Erasing system AC erase
Heads
Recording/Playback head
Permalloy head
Erasing head Double gap ferrite head
Motors
Capstan drive DC servo motor
Reel table drive DC motor
Tape speed 4.8 cm/s
Wow and flutter 0.1% (WRMS)
Fast forward and rewind times
Approx. 52 seconds with C-60 cassette tape
Frequency response (Dolby NR off)
TYPE I (NORMAL) 20 Hz–17 kHz (DIN)
TYPE II (HIGH) 20 Hz–17 kHz (DIN)
TYPE IV (METAL) 20 Hz–17 kHz (DIN)
S/N (Signal level=max recording level, TYPE II type tape)
NR off 56 dB (A weighted)
Dolby B NR on 66 dB (A weighted)
Input sensitivity and impedance
REC (IN) 280 mV/23 kΩ
Output voltage and impedance
PLAY (OUT) 280 mV/220Ω

■ General

Dimensions (W×H×D) 196×103×221 mm
Weight 1.8 kg

SPEAKER SYSTEM SC-HD81

Type 2 way, 2 speaker, bass-reflex system
Speaker(s)
Woofer: 12 cm cone type
Tweeter: 2.5 cm dome type
Impedance 6Ω
Input power 100 W (Music), 50 W (DIN)
Output sound pressure level
86 dB/W (1.0 m)
Cross over frequency 3.5 kHz
Frequency range 40 Hz–40 kHz (−16 dB)
45 Hz–36 kHz (−10 dB)

■ General

Dimensions (W×H×D) 200×336×219 mm
Weight 4.4 kg

SPEAKER SYSTEM SC-HD51

Type 2 way, 2 speaker, bass-reflex system
Speaker(s)
Woofer: 12 cm cone type
Tweeter: 6 cm cone type
Impedance 6Ω
Input power 60 W (Music), 30 W (DIN)
Output sound pressure level
85 dB/W (1.0 m)
Cross over frequency 2.5 kHz
Frequency range 45 Hz–30 kHz (−16 dB)
55 Hz–26 kHz (−10 dB)

■ General

Dimensions (W×H×D) 190×297×216 mm
Weight 3.6 kg

Notes:

1. Specifications are subject to change without notice.
   Weight and dimensions are approximate.
2. Total harmonic distortion is measured by the digital spectrum analyzer.

MASH is a trademark of NTT.

Troubleshooting guide

Before requesting service, make the below checks. If you can't fix the system as described below, or if something not here listed occurs, contact the place of purchase. To install antennas, make adjustments and the sort, contact the place of purchase.

Reference pages are given as black circled numbers.

Problem	Probable cause(s)	Suggested remedy
Problems common to all systems		
Humming is heard while playing.	A power cord or fluorescent lamp is located in the vicinity of cables.	Keep electric appliances away from the stereo. Try plugging the cord in, the other way.
Only one speaker is emitting sound.	One of the wires of the speaker cord is disconnected.	Connect the speaker cord correctly. ❻
	Sound is unbalanced to the left/right.	Balance sound from the balance control. ㉕
There is no sound when a source is being played.	The (+) and (−) wire of the speaker cords are shorted.	Switch the system to the standby mode, and reconnect the speaker cords so that they are not shorted. Then switch on the power.
"U70" appears on the display.	Flat cables are not connected steadily.	Connect the flat cable steadily. ❻ When the "U70" display is not cleared after the flat cable have been connected properly, the unit is damaged. Consult your dealer.
While listening to FM broadcasts		
There is a "rushing noise" during a stereo broadcast which is not audible during a monaural broadcast.	The transmitting station is a long distance away.	If you are using an indoor antenna, change to an outdoor antenna. ❽
You hear excessive noise during a stereo broadcast, and occasionally the sound disappears.	The installation location and orientation of the antenna are unsuitable.	
The stereo indicator flickers and does not light completely.	The transmitting station is a long distance away.	
	The power of the TV set or VCR is ON.	Try switching off the TV set or VCR.
The sound during a stereo broadcast is highly distorted.	There is a building or mountain nearby. [Distortion is caused by interference between the signal from the transmitting station (direct wave) and the signal reflected from the building or mountain (reflected wave).]	Use a high-grade outdoor antenna, and install it in a good location, height, and orientation for reception. ❽
While listening to AM broadcasts		
You hear an unusual beat sound.	You are using the system at the same time you are playing a TV set.	Switch off the TV set, or use the system further away from it.
You hear a low-frequency hum.	The antenna wire is too close to the flat cables/power cord.	Move the antenna away from the flat cables/power cord.
The correct frequency can not be received.	Frequency step is set to 10 kHz.	Hold down the FM/AM button for about 3 seconds (change frequency step to 9 kHz).
When there is a television set nearby		
The picture on the TV disappears or stripes appear on the screen.	The location and orientation of the antenna are incorrect.	If you are using an indoor antenna, change to an outdoor antenna. ❽
	The TV antenna wire is too close to the system.	Separate the antenna wire of the TV set from the system.
While listening to tapes		
Sound is low, intermittent, or poor quality, noisy, scratchy, or unsteady.	Heads are dirty.	Clean the heads. ㊼
	Dolby noise reductions is set in the wrong position.	Set it to match the Dolby NR recording mode. ㉘
The deck does not enter the recording mode.	The erase-prevention tabs are removed from the cassette.	Attach tape to cover the space left by removal of the erase-prevention tabs. ㊹

Problem	Probable cause(s)	Suggested remedy
While listening to compact discs		
The display will not show the correct indication. Disc play does not start when you press the play button.	The disc is loaded upside down.	Reload the disc. SC-HD51 ⑯ SC-HD81 ⑲
	The disc is dirty.	Wipe the disc with a soft cloth. ㊹
	The disc is scratched.	Replace the disc with a new one.
	The disc is badly warped.	
	The disc is a nonstandard one.	Replace the disc with a different one.
	There is condensation inside the CD changer or the player.	Wait for 60 minutes before using the CD changer on the player.
During one-touch editing		
"NO TAPE" appears on the display.	No tape is loaded into deck.	Load a tape. ㉘
"CHANGE TAPE" appears on the display.	The protector tab on the tape is broken.	Cover the tab's hole with adhesive tape or use another tape. ㊵
"ERROR" appears on the display.	You tried to record tracks from a program containing more than one disc.	You cannot record programs if containing tracks from more than one disc. If wanting to do so, set the tape deck to normal recording.
While using the remote control		
The system cannot be operated with the remote control.	The batteries are installed in the reverse polarity.	Reinsert the batteries in the correct polarity. ❺
	The batteries are worn.	Replace the batteries with new batteries. ❺

The servicer will require all components to service your system. Therefore, should service ever be necessary, be sure to bring the entire system.

Maintenance

■ Maintenance of external surfaces

To clean this unit, use a soft, dry cloth.
If the surfaces are extremely dirty, use a soft cloth dipped in a soap-and-water solution or a weak detergent solution.

Wring the cloth well before wiping the unit.
Wipe once again with a soft, dry cloth.
Never use alcohol, paint thinner, benzine, or chemically treated cloths to clean this unit. Such chemicals may damage the finish of your system.

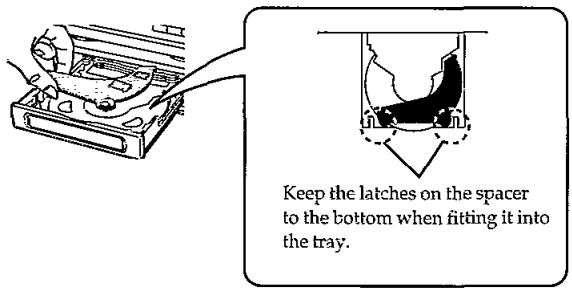
■ Tape head care

To assure sound quality for recording and playback, be sure to clean the heads after approximately every 10 hours of use by the cleaning tape (sold separately).

Before moving or shipping the CD changer SC-HD81 only

Prepare the CD changer as described below to prevent damage to the mechanism.

1. Remove all CDs.
2. Set the shipping spacer in the tray 5 as shown below.



Keep the latches on the spacer to the bottom when fitting it into the tray.

3. Close the tray 5 and turn OFF the system.

Note

When the system is turned OFF, "Good-bye" or "Good night" will appear on the display.
Be sure to move the changer after such indication goes out.

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Matsushita Electric Industrial Co., Ltd.
Central P.O. Box 288, Osaka 530-91, Japan

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